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Antiquity

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Edited by Glyn Daniel

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EDITORIAL NOTICES

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Antiquity

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Editorial

SCIENCE knows no frontiers; a discovery made by any scientist anywhere—provided it is repeated and verified and is published in the conventional way—is valid for all scientists everywhere, and so the writings of Mendeleeff (a Russian Professor of Chemistry), Mendel (an Austrian monk), Dalton (a Lancashire school-master), Priestley (a Unitarian minister in Birmingham), despite differences in language, became the property of the whole scientific world.' These words were spoken by Sir Eric Ashby, at present President and Vice-Chancellor of the Queen's University of Belfast, and Master-Elect of Clare College, Cambridge, in his Ballard-Matthews Lectures delivered at the University College of North Wales in Bangor in January, 1958, and are now published (with additions) as *Technology and the Academics: An Essay on Universities and the Scientific Revolution*—a small book (Macmillan, London, 1958, 15s.) which should be read by all who are interested in the present state and future policy of higher education in Europe and America.

The study of antiquity, whether it be classed as a science, a scientific humanity, or as history, is more than ever a discipline (humane, but aided by scientific techniques and rigorous in its commonsense objective methodology) which recognizes frontiers only at its peril. From China to Peru, from Greenland's icy mountains, from India's coral strand—anything that deals with the long story of man is the concern of the archaeologist, and anything that deals with the early stages of that long adventure the concern of this journal which, though it has just quoted Bishop Heber, cannot agree with him that in Ceylon (or, as he originally wrote, Java) 'every prospect pleases and only man is vile'. Bishop Heber introduced value judgments into this anthropological hymn-writing and was unhappy that 'the heathen in his blindness bows down to wood and stone'.

We cannot have value judgments in the study of antiquity and can no more worry ourselves about the fate of the individuals buried at Offnet, Tollund and Grauballe than we can about the differing policies of nation-states which finance archaeology and archaeologists. We can judge only by the results of excavation and research, and insist that as much direct contact as possible takes place between archaeological students and professionals as often as possible and in as agreeable a way as can be done.

We write in the memory of one of the most direct, delightful and agreeable examples of international archaeological contacts. In late March of this year the Sicilian Government entertained twenty students and four teachers—Professor Piggott, Professor John Evans, Mr Michael Gough, and the writer of these words—for a fortnight in the Lipari Islands and in Sicily. We saw archaeological sites in Vulcano, Panarea, and Filicudi, we climbed (or at least most of us) Stromboli, we worked on Lipari itself, and we spent two days looking at the main sites of interest in north-east Sicily. This was all organized by Professor Bernabò Brea of Siracuse, Superintendent of the Antiquities of Eastern Sicily, most ably assisted

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by Mademoiselle Cavalier who is Curator of the Museum on Lipari. It was a truly international exchange; the twenty students from British universities were distributed as follows: Oxford 1, Cambridge 11, Edinburgh 4, London 3, Belfast 1.

This sort of international exchange is one which should be encouraged. A few years ago the British Council organized a course in Southern Britain for foreign students: it was planned by Professor Piggott and included among its members Professor Becker, Professor Van Giffen, Dr Ramskou, and Professor Glasbergen. We hope that one day the British Council will organize some more of these courses for foreign students and teachers, and that foreign countries will take note of the very fine example set by Bernabò Brea and the Sicilian Government in the 1959 Lipari-Sicily course. The Danes, as in so many things archaeological, have already done much; they invited British professional archaeologists to work in Denmark in 1949 and then had a special Government scheme for the five years 1949-54 to pay for foreign students to visit Danish excavations. At the moment we understand that negotiations are proceeding for the mutual exchange of students and teachers of archaeology between Czechoslovakia and Denmark.

Czechoslovakia itself will be the host at an interesting exchange of archaeologists in October of this year, when, following a suggestion made at the International Congress of Protohistoric and Prehistoric Sciences at Hamburg last August, the Archaeological Institute of the Czech Academy of Science has convened an International Symposium on Problems of the Eneolithic. This will be held in Prague and Brno between 5 and 12 October. Forty people have been selected from all over Europe to take part in this Symposium and we hope to give an account of it in the next number of ANTIQUITY.

Talk of international exchanges emphasizes the need for some way of finding what current excavations outside Britain would welcome students. For Britain itself we have the *Calendar of Excavations* published regularly by the Council for British Archaeology, and there is now no reason why anyone interested in knowing what excavations are going on in Britain and which ones want helpers should not be fully informed by subscribing to this *Calendar*. (The address of the Secretary of the Council for British Archaeology is 10 *Bolton Gardens, London, S.W.5.*) We are always being asked to recommend excavations on the Continent and in the Middle East that would welcome helpers.

From international exchanges to domestic affairs: three items of news of the greatest importance to those interested in British antiquity have been announced in the last few months. The first is the fact that the Commissioners for the Special Purposes of the Income Tax Acts have agreed that the sums paid to the Society of Antiquaries of London under deeds of covenant are 'annual payments' chargeable to tax under Case III of Schedule III. This Delphic statement is explained below in a note by the Assistant Secretary of the Society of Antiquaries (p. 219). Dr Corder, together with our Advisory Editor, Sir Mortimer Wheeler, then President of the Society of Antiquaries, were largely responsible for the negotiations which led to the decision that will give immediate and necessary financial relief to all archaeological and historical societies in Britain.

The second piece of news was referred to briefly in a note in our last number, namely the foundation of a British School of History and Archaeology in East Africa and the setting up of a Committee to consider a British Institute in the Far East (ANTIQUITY, 1959, 137).

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And the third was the announcement of 29 May that the Trustees of the British Museum are proceeding with the imminent reconstruction of two bombed galleries and intend to raise—at some unspecified date—the sub-department of Prehistoric Archaeology and Roman Britain to the status of an independent department. This, said *The Times* in a leading article that very properly presumed this announcement also meant an increase in the staff of such a department, ‘marks a further step both in the recognition of the antiquities of Britain as an important study, and in the long process of subdividing the Museum’s treatment of archaeology’ (*The Times*, 29 May, 1959) and went on as follows: ‘One reason which makes it important that the formation and proper staffing of the new department should not be long delayed is the extraordinary development since the war of interest in European archaeology, and perhaps especially in prehistory.’

All right-minded archaeologists will echo those sentiments, as did Professor Christopher Hawkes, in a long and important letter in *The Times* for 2 June in which he contrasted the way in which, since the war, public money was annually spent ‘through the Ministry of Works for the maintenance and excavation of archaeological sites, through the Royal Commissions on Monuments for investigating them, through the archaeology branch of the Ordnance Survey for mapping them, and through the University Grants Committee for the support of departments of archaeology in numerous Universities’, but little on the expansion, reconstruction and development of Museums. ‘The national repository of archaeological material for comparison, in England, for the immense stretch of time before the 5th century A.D.’, wrote Professor Hawkes, ‘is in charge of a sub-department so small and cramped that only by signal valour ... has it managed to make any contributions whatsoever to its subject.’

But making this sub-department into a department is not enough. We need, and should press for, a National Museum of Antiquities. Stockholm and Copenhagen have National Museums which are the envy of all of us; the reconstruction and replanning of the National Museum at Athens, which is taking place now, is a splendid thing, and the new Mycenaean Gallery is one of the most exciting and rich displays in any Museum. The National Museum of Wales has long been the cynosure of others whose Ancient British ancestry has been diluted with Angle, Saxon or Jutish blood. Dublin and Edinburgh have their National Museums, and given buildings and money, could begin to emulate Cardiff. Cardiff, Edinburgh, Dublin, yes, but London, no. What odd people the English are that they have not as yet insisted on a National Museum of Antiquities and allowed even until the middle of the 20th century the strange anomaly that crowds into one building in Bloomsbury our National Library, our National Museum of Antiquities, and half a dozen other Museums as well. Is it not also an anomaly that this excessively important collection of museums and libraries should be looked after by a body, not of experts in Librarianship and Museums, but of oddly assorted public and political figures of which the three Principal Trustees are the Archbishop of Canterbury, the Lord High Chancellor and the Speaker of the House of Commons? We need an Act of Parliament to abolish the Standing Committee of Trustees, make the British Museum (Natural History) entirely independent, and break up the Bloomsbury juggernaut into a National Library, a National Museum of Antiquities, a National Museum of Ethnography, and a National Museum of Near and Far Eastern Antiquities.

These may sound counsels of perfection. So may sound the suggestion of more British Schools abroad. At the moment we have five—Rome, Athens, Jerusalem, Baghdad and Ankara—and are hopeful of two more—East Africa and the Far East. But what about the

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great sub-continent of India itself, to whose political development Britain contributed so much, and to whose cultural development we should continue to do all we can. And Malta? Here we have already done much; Professor John Evans has summarized recent work on its prehistory in his *Malta* (London, 1959), to be reviewed in our next number by Professor Bernabò Brea, and this essay is only a foretaste of the magistral inventory of the ancient monuments of Malta which he has completed for the Committee of the Archaeological Survey of Malta. And it is good to read the *Report of the Museum Department of Malta for the year 1957-8*, produced by Charles Zammit, the Director of the Malta National Museum (itself inaugurated on 11 January, 1958)—an excellently produced document (*obtainable from The National Museum, Auberge de Provence, Valletta*) with plans of rock-cut tombs at Tarxien, and photographs of Saracenic Graves at Rabat. We should help Malta (and the cause of Middle Mediterranean archaeology) by a wider interest in its cultural heritage. And where are the young men, who, going neither east nor west, will tell us what went on in prehistoric times on the islands of Lampedusa, Linosa and Pantelleria, and how the monuments of these islands may be interpreted in terms of our modern knowledge of European prehistory?

And Lisbon? Surely we should have a School of Archaeology and History in the friendly territory of our oldest ally—and not merely to keep up with the Germans in Madrid. The study of the western seaways is a particular aspect of our British history which we neglect, though necessarily less in prehistoric than in post-Roman times. The past of Portugal, southern Spain and north-western Spain is of the greatest importance to those people of the *Prettanikai nesoi* who now call themselves English, Welsh and Irish. Why not a joint Anglo-Irish School of Archaeology and History in Lisbon or Coimbra, with a lunula over the door and a conference room arranged on the plan of a cruciform Passage Grave?

Sir Thomas Kendrick, whose knowledge of the direction of Museums and of the development of British Antiquity, to say no more, entitle his views to the greatest respect, writes that he is not convinced of the need of a Museum of National Antiquities and that if it existed he might prefer it 'to be housed in a dark, draughty and entirely unsuitable old castle with plenty of spiral staircases' (ANTIQUITY, 1954, 140), and confessed, when he was Director and Principal Librarian of the British Museum that he treasured and served as his governing text that phrase 'behold he taketh up the isles as a very little thing'. It may well be, as our Continental colleagues who regard the world as ending at the English Channel, and beyond being Ultima Thule, never cease reminding us, that the British Isles are, archaeologically, a very little thing, and that our young archaeologists should be persuaded away to the Mediterranean and the Near East, to India and Africa. But it equally may not be so. The heritage of ancient Britain is a remarkable one; the men who produced Stonehenge and Avebury, New Grange and Maes Howe, Maiden Castle and Tre'r Ceiri, did as well as any. The antiquity of Britain needs a magnificent new Museum, and the skill and interest of its present-day archaeologists opportunity to practise and preach abroad. We are grateful for the promise of a department in the British Museum, and for schools in East Africa and the Far East; we are grateful to the wisdom of those who have restored the covenanted money to our archaeological societies, but we ask for more.

The Gundestrup Bowl: A Reassessment

by OLE KLINDT-JENSEN

The Gundestrup Bowl is one of the most famous objects of Celtic art, and certainly one of the most treasured possessions of the National Museum at Copenhagen. Here, Dr Klindt-Jensen, a Curator in the Prehistoric Department of the National Museum, re-examines current views on the origin and date of the bowl.

THE great silver cauldron from Gundestrup is one of the most fascinating exhibits in the National Museum of Copenhagen. It was imported into Denmark in antiquity and, since its discovery in 1891, has been the subject of considerable discussion. Although most scholars have agreed in assigning it to a 1st-century B.C. Gallic context, this identification is by no means universally accepted. Other suggested areas of origin have ranged from the eastern Danubian countries and South Russia to Denmark and even to northern India; similarly, estimations of the date of the object have varied from the 1st century B.C. to the 5th century A.D.

Although the Gundestrup cauldron is a unique object differences in style between the various plates that make up the body of the vessel point to the fact that several artists were involved in its manufacture. In the centre of each of the seven (originally eight) outer plates are placed human busts, with minor figures occupying secondary positions, while the five, long, inner plates, and the bottom plate, bear varied motifs. From a technical point of view it is an outstanding specimen of the silversmith's art; particularly fine is the bull on the bottom plate, which is executed with boldness and great skill. The cauldron must certainly be regarded as a product of a vigorous school of craftsmanship.

Let us examine the strange style of this object by discussing in detail one of the plates (PLATE XVII). The entire surface of the plate is covered by a miscellaneous collection of scenes which, while interlocking with each other, retain their separate identity. In order that the whole face of the plate might be covered, the background is filled up with twisting tendrils and leaf patterns.

One scene is made up of four figures; a male human figure with stag antlers (commonly accepted as the Gallic god Cernunnus), a serpent which he holds in his hand and two flanking animals (a stag and a wolf). Although the figures are not placed in the same plane, the eyes of the three large figures are level and give a striking impression of the connection between them. The archaic form of the composition is revealed by two factors, by the antithetical placing of the figures and by the attempt to fill the whole area available for decoration.

The decoration is carried out in a non-plastic, low relief. There is no foreshortening of the figures, but the composition is carefully executed; the arms of the god curve elegantly between the flanking figures. The contours are thus given a life of their own. The crossed legs are seen from above and not, as is the rest of the body, from the front. The limbs are kept clear of the body. The face is clean shaven and the features are rather stiff; the hair is indicated by thick, incised locks running obliquely from a central parting.

A torc with terminal knobs encircles his neck and another can be seen in his right hand. He wears a rather stylized, tight, trousered costume and a wide belt. His garment reaches to the knees. He also wears shoes, which are tied at the ankles.

The artist's imagination is shown in the representation of a serpent with a ram's head and by the god with the stag's antlers. Both representations suggest some aspect of Celtic religion and occur several times in Romano-Celtic contexts. But while representations of a serpent with ram's head are known both in Gaul and central Europe, typical representations of Cernunnus (a male god with stag's antlers, seated cross-legged) are limited to central and northern Gaul. Figures in similar seated positions are to be seen on a group of La Tène II statues from Provence (PLATE XIX, *d*); these do not, however, represent Cernunnus (although they presumably constitute the original model for the seated motif). The problem is made more complicated by the fact that, in Gaul, three-headed gods and goddesses with antlers are also depicted in a cross-legged position. The name of the god only occurs once (on the Paris altar), but this allows the identification of this strange figure.¹

It is hardly surprising that two such very distinctive figures as Cernunnus and the ram's-headed serpent cannot be exactly paralleled by Roman gods, in the manner that is so common in Romanized Gaul. The Romans inferred, as Caesar expressed it, that the gods of the Gauls were the same as the gods of Rome and the Gauls agreed with this inference. Most Gallic gods took on a Graeco-Roman form, although they frequently kept their Celtic attributes. The Gallo-Roman Jupiter was thus easily recognized by his wheel. Cernunnus, however, although he was given certain Roman characteristics by Gallo-Roman artists, did not change essentially. On the Reims altar, for example, Cernunnus is seen, seated in a cross-legged position, pouring coins from a large leather purse (PLATE XIX, *b*)²—a strange mixture of Gallic and Roman belief. The style of the piece is Roman and the Roman influence is heightened by the fact that Apollo and Mercury are standing beside Cernunnus. Below are two small animals, a stag and an ox, which presumably, like the coins, represent fertility and prosperity. The rat at the top of the stone may assign Cernunnus to the underworld.

Although the difference between the Gundestrup cauldron and the Reims altar is considerable, it is nevertheless clear that they emanate from the same cultural area. The change in style is due, as far as one can tell, to a Roman influence which, though present on the Reims Altar, does not appear in the Cernunnus of the cauldron. It is possible to date the cauldron by comparing the weapons and ornaments represented on it with similar objects found in dated contexts in graves or in the art. Hence the reliefs on the arch of Orange, which can presumably be dated to the middle of the 1st century B.C.,³ are particularly important.

The shields are of a characteristic rectangular, almost hexagonal, shape, having a round boss which is secured at the rim by a number of rivets (PLATE XVIII, *d*, *e*). The lower part of the boss is cylindrical while the upper part forms a flattened hemisphere which, in some instances, while retaining its rounded form, is slightly pointed. These bosses seem to be characteristic of La Tène period III and a number of examples survive in the Celtic area (FIG. 1, *e*).⁴

The swords are represented on two plates from the cauldron. The hilt seems to have two pairs of rounded features, represented by circles, protruding from the upper and the lower part (PLATE XVIII, *b*, *c*)—a detail of some importance. Sword hilts with such rounded protrusions are a characteristic La Tène form (FIG. 1, *a*) (as are the closely related anthropo-

¹ The most recent discussion of Cernunnus is Ph. P. Bober's extensive survey in *A.J.A.*, 55, 1951, p. 13. Related types include:—standing god with stag antlers: goddess sitting with crossed legs: three-headed god sitting with crossed legs: and sculptures of La Tène date of seated crossed-leg figures.

² Em. Espérandieu, *Recueil*, v, No. 3653. Cf. v, No. 4195.

³ P. Couissin, *Revue arch.*, xviii, 1923, p. 85; xix, 1924, p. 29. A. Piganiol, *Comptes rendus de l'Académie des Inscr. et des Belles-Lettres*, 1954 (1955), p. 20.

⁴ P. Couissin, *Revue arch.*, xviii, 1923, p. 213. G. v. Merhart, *W.P.Z.* 27, 1940, p. 88.

THE GUNDESTRUP BOWL: A REASSESSMENT

morphic hilts) and are carried, for example, by the Gallic warriors represented on the reliefs of the 1st and 2nd centuries B.C. (FIG. 1, *b*) and can be seen on Gallic coins (FIG. 1, *c*). The form is still found, though rarely, at the beginning of the Roman period (PLATE XIX, *a*); the pommel of both the common early Roman sword, the *gladius*, and the late Roman *spatha*, was a simple knob, which could, however, be ornamented with studs.⁵

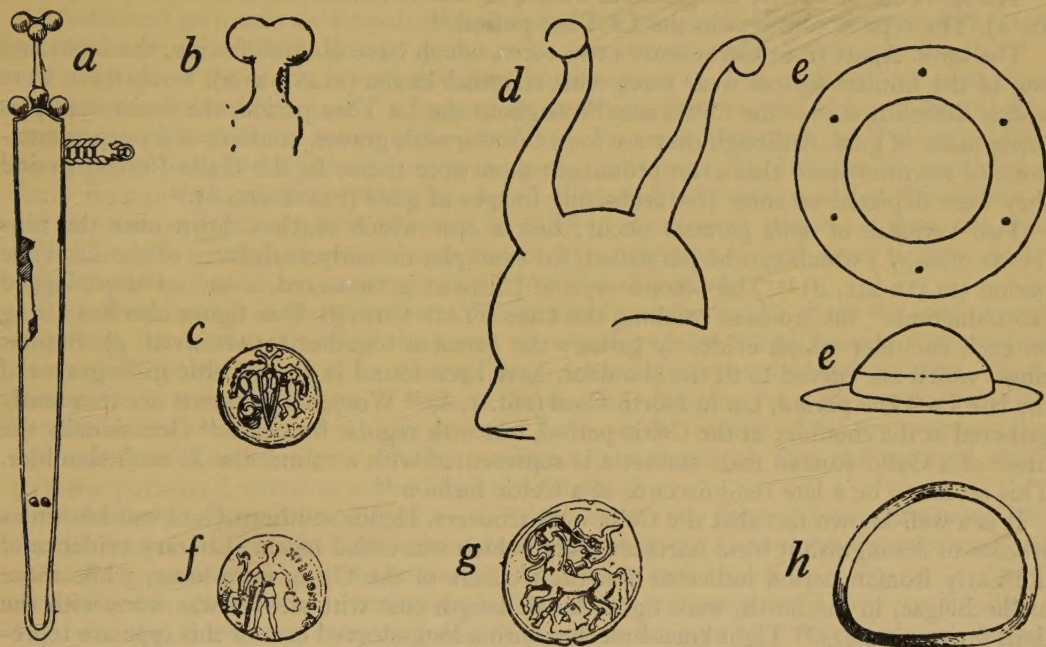


FIG. 1. *a*. Celtic sword from St-Maur-les-Fosses (after Bertrand); *b*. drawing of Celtic sword from the Arch of Orange (after Couissin); *c*. Gallic coin showing a sword (after Blanchet); *d*. drawing of a Gallic helmet on the Arch of Orange (after Couissin); *e*. Celtic La Tène III shield boss (after von Merhart); *f*. and *g*. Gallic coins with representations of *carnyxes* (after Blanchet); *h*. Shoulder ring from Ornavasso (after Déchelette).

As the shields cannot be earlier than La Tène III, and the swords fit best in the pre-Roman age, it seems reasonable that the cauldron should be dated to the 1st century B.C.

The *helmets* are decorated in various ways. Horned helmets occur twice (PLATE XVIII, *f*) in a form that is closely paralleled, for instance, by the Gallic helmets on the Orange arch (FIG. 1, *d*).⁶ Other helmets are ornamented with a bird or boar (PLATE XVIII, *g*)—insignia which occur commonly on Gallic monuments and coins. Diodorus, in his description of Gallic helmets, mentions similar horns and crests.⁷ In this context it is interesting to note that

⁵ J. Déchelette, *Manuel d'arch.*, II, 3, p. 1113, fig. 459. A. Maître, *Revue arch.* 1888, I, p. 387, fig. 1. F. Benoit, *Gallia*, XIV, 1956, p. 222, fig. 8. P. Couissin, *Revue arch.*, XVIII, 1923, p. 52; XX, 1924, p. 292; XXV, 1927, p. 155. Cf. R. R. Clarke and C. F. C. Hawkes, *P. P. S.*, XXI, 1955, p. 198. *Spatha* with studs or small knobs on the upper part of the pommel: C. Engelhardt, *Denmark in the Early Iron Age*, 1866, pl. 9: 1 and 9.

⁶ P. Couissin, *Revue arch.*, XVII, 1923, p. 315; XVIII, 1923, p. 77; XIX, 1924, p. 41; XXIV, 1926, p. 210.

⁷ Diod. Sic., v, 30. The helmets, pls. XVIII, *g*, and XIX, *c*, are closely related to the Negau type of La Tène III (P. Reinecke, *Ber. der Röm.-Germ. Komm.*, 1942, e.g. p. 179).

the strange horns from Waldalgesheim presumably were mounted on a helmet,⁸ they are reminiscent of the horns on the well-known Vixø helmets which may be their prototypes.⁹

The *carnyx*. This strange Celtic wind instrument with animal head (PLATE XVIII, *a*) is well known from Gaul; and it does appear frequently, for example, on Gallic coins (FIG. 1, *f* and *g*).¹⁰

The *spurs* are of a fairly simple form with spherical terminals and a curved spike (PLATE XX, *a*). The type is common in the La Tène period.¹¹

The *torcs*. Apart from Cernunnus's two torcs, which have oblique fluting, the busts and one of the human figures wear torcs with terminal knobs (PLATE XVII). Such torcs were widely distributed over the Celtic area throughout the La Tène period, the finest examples being made of gold. Although they are found in women's graves, contemporary representations of warriors show that even prominent men wore them. In the Gallo-Roman period they were depicted on some few archaising images of gods (PLATE XIX, *b*).¹²

Two varieties of *male garment* occur; first a coat which reaches down over the hips (PLATE XVIII, *f*) which can be paralleled, for example, on early sculptures of the La Tène period (PLATE XIX, *d*).¹³ The second type of garment is trousered, a sort of short-legged 'combinations', the trousers reaching the knee (PLATE XVIII, *g*). One figure also has a ring on each shoulder which evidently gathers the garment together (PLATE XVIII, *g*). Similar rings, which are curved to fit the shoulder, have been found in some Celtic male graves of the late La Tène period, i.e. in North Gaul (FIG. 1, *h*).¹⁴ Women's garments are frequently gathered at the shoulder in the Celtic period, but with regular brooches.¹⁵ Occasionally the tunic of a Gallo-Roman male statuette is represented with a round disc at each shoulder. This seems to be a late reminiscence of a Celtic fashion.¹⁶

It is a well-known fact that the Celts wore trousers. Hence southern Gaul was known as *bracata* to distinguish it from northern Italy, which was called *togata*. Literary evidence of the Early Roman period indicates that the trousers of the Gauls were loose, while those of the Belgae, in the north, were tight. A half-length coat with sleeves was worn with the tight fitting trousers.¹⁷ Tight knee-breeches with a long-sleeved coat of this type are represented on tombstones of Celtic auxiliary troops stationed on the northern Rhine in the 1st century A.D. (PLATE XIX, *a*). This is presumably one of the areas from which the fashion of wearing trousers spread, during the course of the 2nd century A.D., to the soldiers of the Roman Empire.¹⁸

⁸ P. Jacobsthal, *Early Celtic Art*, 1944, No. 156 *a*, pl. 96.

⁹ O. Klindt-Jensen, *Denmark Before the Vikings*, 1957, pl. 39.

¹⁰ S. Müller, *Nord. Fortidsm.*, I, 1892, p. 46. A. Blanchet, *Traité des monnaies Gauloises*, I, 1905, figs. 164-65, and 263. Cf. T. G. E. Powell, *The Celts*, 1958, p. 265, pl. 47, *a* and *c*. S. Piggott, *Ant. J.*, XXXIX, 1959, p. 19.

¹¹ J. Déchelette, *Manuel d'arch.*, II, 3, p. 1202.

¹² On coins: A. Blanchet, *Traité des Monnaies Gauloises*, II, 1905, f.i. figs. 392-93, 428-29. S. Müller, *Aarb.* 1900, p. 141. P. Jacobsthal, *E.C.A.*, p. 122. J. Déchelette, *Manuel d'arch.*, II, 3, p. 1207. P. Bienkowski, *Die Darstellungen der Gallier in der hell. Kunst*, 1908, fig. 1-2.

¹³ F. Benoit, *L'art primitif méditerranéen de la vallée du Rhône*, 1955, p. 49 (cf. his fig. 12). L. Halbert, *Medd. Lund*, 1957, p. 105.

¹⁴ J. Déchelette, *Manuel d'arch.*, II, 3, p. 1249, cf. fig. 447. R. Ulrich, *Bellinzona*, p. 707, Taf., LXXXIX Grab 424, 2.

¹⁵ O. Klindt-Jensen, *Foreign Influences in Denmark's Early Iron Age*, 1950, p. 50. Cf. P. Jacobsthal, *Greek Pins*, 1956, p. 93, figs. 331-38.

¹⁶ S. Reinach, *Bronzes figurés de la Gaule Romaine*, 1894, p. 185, No. 177.

¹⁷ Strabo, IV, 4, 3. Cf. M. Renard, *Ann. Soc. d'arch. de Bruxelles*, 18, 1904, p. 394. Southern Gallic fashion: R. Nierhaus, *B. J.*, 153, 1953, p. 55.

¹⁸ L. Lindenschmit, *Altertümer unserer heidn. Vorzeit*, III, 1881, Heft VIII, Taf. 4. K. Schumacher, *Germanendarstellungen*, 1935, p. 18. K. Lehman-Hartleben, *Die Trajanssäule*, 1926, Taf. 11 and 21. Em. Espéran-dieu, *Recueil*, passim. Cf. Pauly-Wissowa, *R.E.*, I, 2100. *Germania Romana*, 1924, p. 33.

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The reason why so few representations of Gallic trousers are known is, in some measure, due to the strong Hellenistic tradition which tended to depict Gallic warriors naked. Later, in Romanized Gaul, the richer element of the male population would be more influenced by southern fashions in the matter of clothes, and as it was only the upper classes who could afford to have themselves portrayed on reliefs, we can hardly expect to find Gallic *bracas* on the stone monuments. It will be seen, however, that the Gallic gods retain their old-fashioned garments on Romanized reliefs; thus Cernunnus often wears trousers (PLATE XIX, *b*), while other Gallo-Roman gods can be seen wearing half-length trousers.¹⁹

The shape of *the beards* is varied and highly imaginative. The beard of one of the gods on the outer plates has neatly separated locks which curve at the tips (PLATE XX, *e*). A similar beard is depicted on an early relief from Provence (PLATE XX, *g*).²⁰ Another Gundestrup god has a forked beard curling at the tips (PLATE XX, *f*). This can be paralleled on Early Roman *terra sigillata* (PLATE XX, *h-j*).²¹ We can hardly presume that this fashion in beards commonly would have survived in Gaul in the Roman period—it does not occur anywhere else—rather the motif was copied by a tradition-bound *terra sigillata* potter, who may even have been copying a motif from an ancient object.

The *horse-harness* is characteristic. The straps from the saddle, from the fore-quarters and from the hind-quarters of the horse were gathered by round mounts with stamped decorations (PLATE XIX, *c*). A loose strap hangs from a mount on the hind-quarters. The bit terminates in a ring. This type of harness (loose straps hanging from all four mounts) is to be seen on the Orange arch and, in a similar form, on the earliest of the gravestones raised in memory of Romano-Celtic cavalry auxiliaries (PLATE XIX, *a*). Bits and mounts, similar to those portrayed, occur in archaeological contexts.²²

Such characteristic cultural features as these support the proposed 1st century B.C. date for the manufacture of the Gundestrup cauldron, while the Cernunnus figure, seated with crossed legs and wearing the tight-trousered garment, points towards northern Gaul as the area of origin. It is worth mentioning here that the repoussée technique was popular in Gaul and that the trick of inlaying coloured pupils in the eyes with the aid of resin was also well known there. A number of objects of repoussée-decorated sheet metal have been found in France; there are for example a series of masks of silver and bronze, some of which are undoubtedly of pre-Roman date, while others date from the Gallo-Roman period.²³ The mask is, of course, a popular motif in early Celtic art and half-length repoussée figures, with raised arms, hammered out of bronze sheet metal, are known from the rich Waldalgesheim grave (it should be noted that the fingers on the Waldalgesheim pieces, unlike those on the Gundestrup cauldron, are out-stretched). The brow and nose profile on these early masks, as on the Gundestrup busts, often form straight lines; another common feature is the absence of ears.²⁴ Of special interest is the strange bronze figure from Bouray which is, as Lantier so aptly says, 'un travail de chaudronnerie'—a tinker's attempt to work in the round. It is made up of several raised reliefs which together form the figure of a man sitting with his legs crossed, in exactly the same way as Cernunnus on the Gundestrup cauldron; the effect, however, is strangely unplastic.

¹⁹ Em. Espérandieu, *Recueil*, vi, No. 4708. S. Reinach, *Bronzes figurés*, pp. 137 and 152. P. Parruzot, *Revue arch. de l'Est et du Centre-Est*, vi, 1955, p. 335.

²⁰ F. Benoit, *L'art primitif médit. de la Vallée du Rhône*, 1955, pl. xviii, 3.

²¹ R. Lantier, *Comptes rendus de l'Acad. des Inscr.* 1932, p. 302.

²² O. Klindt-Jensen, *For. Infl.*, p. 80. Cf. recent unpublished finds at Manching, Bavaria.

²³ R. Lantier, *Mon. et Mémoires Piot*, 37, 1940, p. 201.

²⁴ P. Jacobsthal, *E.C.A.*, p. 13; O. Klindt-Jensen, *For. Infl.*, p. 126, fig. 80. P. Lambrechts, *L'exaltation de la tête dans la pensée et dans l'art des Celtes*, 1954.

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A quick survey of the animal motifs of the Gundestrup plates demonstrates that in some ways they copy Mediterranean art, e.g. the occasional foreshortened eye. Other representations, however, are executed in the local Celtic style. The two oxen, on either side of the upper part of the Cernunnus plate, have large, lentoid eyes and long necks (PLATE XX, *b*), features which are paralleled on well-known Celtic sculptures of the late La Tène period (PLATE XX, *c*).²⁵ The head of the magnificent bull, on the bottom plate, reminds one of the heads on the silver ring from Trichtingen, which is usually dated to a late stage of the La Tène period.²⁶

In order to see whether any of the foreign motifs deny a 1st century B.C. dating for the cauldron we must examine them briefly here.

One of the best-known scenes represents *the fight of Heracles with the Nemean lion*, a very popular Greek motif which is often found, for example, on Greek vases. On the Gundestrup plate Heracles is dressed in trousers, while the lion looks more like a boar; it is perfectly obvious that the artist had never seen a lion.²⁷ The small *rider on a dolphin* has been transformed into a vernacular form by a Celtic artist who has had some difficulty in drawing the dolphin's head. Although the artist had obviously never seen a real dolphin, he may well have got his model from the widely distributed Hellenistic pottery on which dolphins are shown with up-turned tails.²⁸

The *griffins* and the *flying seahorses* are inspired from the Mediterranean world, presumably from the Etruscan area. Furthermore, the lion with denticulated mane is known only from the Etruscan site of Vulci.²⁹ A female griffin with stiff wings, the ends of which are turned in a similar manner to those of the flying seahorses, occurs on an Etruscan sarcophagus (the strange tips on the belly presumably representing the breasts).³⁰ The flying seahorses occur on Gallic coins and on a single Gallo-Roman monument.³¹

We cannot tell whether the prototypes of the strange *elephants*, with tiny ears, are to be found on the Etruscan vases or on impressed Hellenistic pottery.³² We must emphasize that the representation of elephants with small ears does not necessarily indicate influences from Eastern (Indian) art. It is certainly true that today the African elephant has large ears and that the Indian elephant's ears are small, but we know, from literary sources and from pictures,³³ that in ancient times the Mediterranean peoples had a now extinct species of elephant with small ears.

The plant-scrolls on some of their coins indicate that the Gauls copied *vegetable ornaments* from Mediterranean prototypes.³⁴ The plant most commonly represented on the Gundestrup cauldron is ivy; on the bottom plate this twists and turns in the same manner as the ivy on certain Etruscan mirrors. On the bottom plate is an asymmetrical scroll of strange trilobate leaves (PLATE XX, *a*); it is possible that Etruscan scrolls, like that illustrated in FIG. 2, may have served as a prototype.³⁵ Other leaves correspond with well-known

²⁵ R. Lantier, *Revue arch.*, I, 1939, p. 236. O. Klindt-Jensen, *For. Infl.*, p. 115.

²⁶ W. von Jenny, *Keltische Metallarbeiten*, 1935, Taf. 19.

²⁷ S. Müller, *Vor Oldtid*, 1897, p. 573.

²⁸ F. Courby, *Les vases grecs à reliefs*, 1922, p. 503, fig. 100: 6c. H. Norling-Christensen thinks that the dolphin type is still later and cites parallels from late Roman times (*Aarb.* 1954, p. 87).

²⁹ P. J. Riis, *Fra Nationalmuseets Arbejdsmark*, 1950, p. 40.

³⁰ R. Herbig, *Die jüngeretruskischen Steinsarkophage*, 1952, p. 19, Taf. 57, 16.

³¹ A. Blanchet, *Traité des monnaies Gauloises*, 1905, fig. 139. *Ant. Denk.*, I, Taf. 15.

³² J. D. Beazley, *Etruscan Vase-Painting*, 1947, p. 211.

³³ O. Klindt-Jensen, *For. Infl.*, p. 137.

³⁴ A. Blanchet, *Traité*, figs. 290 and 298.

³⁵ R. Herbig, *Die jüngeretruskischen Steinsarkophage*, 1952, p. 23, *Abb.* 3. H. Norling-Christensen argues for a much later date of this plant ornamentation (*Aarb.* 1954, p. 83).

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Mediterranean patterns, while some show a definite stylization, in a manner one only would expect of a Celtic artist. For example, a whirling pattern composed of four ivy leaves is rather peculiar (PLATE XX, *d*), and here the Celtic temperament has, for once, been allowed to express itself. The whirling scheme in this style is popular in Celtic ornament.³⁶

FIG. 2. Plant ornament on an Etruscan sarcophagus of Hellenistic Age. (See footnote 35.)



We have thus seen how the Gundestrup artists were influenced by a strangely archaic, Oriental imagery and mode of composition. This is seen in the use of antithesis and in the treatment of the contours which, where possible, are left unbroken. It is further seen in the lack of perspective, for example legs and arms, which are seen from the side, are delineated in an unnaturally turned position, so that one leg does not cover the other. Other traces are to be seen in the filling of the surface with plant scrolls and in the appearance of griffins, flying seahorses and heraldic birds, with wings stiffly curved in an archaic style. Furthermore the faces of the gods on the outer plates, and on some of the inner plates, have stiffly modelled features; the male gods are represented with lifted arms and clenched fists, which mostly grip animals or human figures. Such features indicate an archaic style, just as, on the female figures, the folded arms evidently represent a submerged memory of the characteristic gesture of the Oriental fertility goddess. These features reached Greece and Italy with the Orientalized style, and it is worth remembering that the archaism survived longer in North Italy than anywhere else in the Mediterranean area.³⁷

However, it is a jump from the early art of North Italy (and especially that of the Bologna area) to the Celtic art of La Tène III, several hundred years later. Although imported objects of this early period have been found in Central and western Europe (e.g. the Grächwil vessel with its representation of a goddess holding two hares, surrounded by four lions and other wild beasts³⁸) there is no proof that these objects survived in the Celtic area through the centuries, or that, at this early date, they were already being copied by Celtic artists.

There are, however, a number of motifs, found on Celtic objects of the 1st centuries B.C. and A.D., which were borrowed from early North Italian art. A typical example is

³⁶ Cf. P. Jacobsthal, *E.C.A.*, plate 270: 283 and plate 279: 474.

³⁷ M. Pallottino, *Etruscologia*, 1947, p. 211. F. Benoit, *Atti del 1° Congr. intern. di preistoria e di protoist. mediterranea*, 1950, p. 439.

³⁸ H. Bloesch, *Antike Kunst in der Schweiz*, 1943, pp. 22 and 148.

afforded by the recently found stamp on a Swiss La Tène III sword (PLATE XX, *m*).³⁹ This stamp, which is quite small in size, shows two ibexes, standing on their hind legs eating from a palm. Sculptures in Bologna, which are dated to a period some hundred years earlier, show exactly the same motif (PLATE XX, *l*), which in turn can be traced to the Near East (PLATE XX, *k*).⁴⁰ While the difference in date between the Oriental and the North Italian version of this motif is not very great, the interval of time, between the latter and the Celtic rendering of it, is undeniably quite considerable.

The Augustan monumental arch at Susa bears, as Studniczka has shown, the representation of a sacrifice in an archaic style.⁴¹ This is especially marked in the conscious effort towards antithesis and the threatening posture of the bull, not otherwise found on reliefs depicting the *suovetaurilia* sacrifice, and, most conspicuous of all, a large stiffly-curved leaf ornament. This motif is characteristic of the situla art of Este several centuries earlier.

This strange leaf ornament is also found on the Gallo-Roman silver cup in the Hildesheim treasure, which seems to be contemporary with the Susa arch.⁴² The threatening bull, reminiscent of that on the bottom plate of the Gundestrup cauldron, is to be seen on the cup, as is the antithetical arrangement of a boar and a wolf.⁴³

During La Tène II-III there flourished in Este an art which used bronze sheet as its medium and which seems to have exercised an important influence on the Celtic craftsmanship of which it is reminiscent.⁴⁴ It is on the whole impossible to avoid the conclusion that the artists of North Italy and Gaul were influenced by the tradition of an earlier art, or that they, at least, felt attracted to archaic motifs.

Thus a pictorial art existed, among the Celts of the Late La Tène period, which was especially influenced from North Italy and Provence. The Celtic coins bear witness, in an interesting manner, to the effect of Mediterranean influences on the Celtic style: several motifs on the Gundestrup cauldron are, as we have seen, found on these coins. Closer to the art of Provence are a number of Celtic sculptures, among which is a recent find from a pit near Prague.⁴⁵ It represents the bust of a man and is dated to the La Tène III period. The face is striking with curved moustaches and arched eyes and eyebrows which terminate in spirals. This is a typical Celtic work, and its connection with the early Celtic art is indicated by its strangely flat relief and by the eyebrow spirals. It is also reminiscent of some of the bronze masks on the contemporary anthropoid daggers which were popular, among other places, in Bohemia and France.⁴⁶

A group of simple stone figures fit naturally into the La Tène III context, among these are the stelae from Euffigneix and Hallé, which have carved, human heads.⁴⁷ The man represented on the Hallé carving has simply executed arms and curved moustaches similar to those to be seen on the Prague example. The figures on the two stelae wear torcs round their necks, the central part of the Euffigneix stele is filled with a large representation of a boar. The prototype for this may be seen in some early stelae, e.g. those from Holzgerlingen and Waldenbuch.⁴⁸

³⁹ R. Wyss, *Antiquity*, xxx, 1956, p. 27.

⁴⁰ L. Polacco, *Studi etruschi*, xxi, 1951, p. 59. F. Benoit, *Ogam*, 7, 1955, p. 285.

⁴¹ *Arch. žb.*, XVIII, 1903, p. 1.

⁴² E. Pernice and Fr Winter, *Der Hildesheimer Silberfund*, 1901, p. 67.

⁴³ Cf. O. Klindt-Jensen, *For. Infl.*, p. 109.

⁴⁴ O. Klindt-Jensen, *For. Infl.*, p. 133.

⁴⁵ J. Filip, *Keltové ve střední Evropě*, 1956, p. 366, Tab. LXX.

⁴⁶ C. F. C. Hawkes, *P.P.S.*, 1955, p. 201.

⁴⁷ P. Cravoyat, *Revue arch. de l'Est et du Centre-Est*, 1955, p. 219, fig. 81. Em. Espérandieu, *Recueil*, xiv, 1955, No. 8319, Tours (R. Lantier). R. Lantier, *Ber. Röm.-germ. Komm.*, 20, 1930, Taf. 30. H. Arbman, *Tor*, 1948, p. 109.

⁴⁸ P. Jacobsthal, *E.C.A.*, p. 9, Nos. 13 and 15.

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But the Gauls also had wooden sculptures. A carved wooden head from Luxeuil, the only preserved one of a great many specimens, wears a torc, the face being simply cut.⁴⁹ It is presumably this type of sculpture, in wood or stone, which is the basis of Caesar's mention of numerous idols of Mercury in Gaul.⁵⁰

Both on this basis and on the basis of such features as the weapons and the tight trousers, the Gundestrup cauldron fits naturally into the cultural context of North Gaul, where Cernunnus was worshipped. The style of the cauldron would seem to indicate that it was not manufactured during the supremacy of the Romans; it is very different from the typical Gallo-Roman products as PLATE XIX, b.⁵¹ There is no trace here of an interchange of Roman and Gallic style, in the manner so typical of the Imperial period.

Judging from Roman sources there was no lack of decorated cauldrons among the Celts. In the triumphal procession after the victory over the Boii in the year 191 B.C. there were carried before P. Cornelius Scipio, according to Livy, 'Gallic bronze vessels and 2340 pounds of silver, either unworked, or worked into the peculiar Gallic vessels, which were not inartistic'⁵² Although the weight of the silver recorded by Livy might be exaggerated, it gives an impression of the large number of Celtic bronze and silver cauldrons now lost. The cauldrons from Braa, Rynkeby and Gundestrup represent only a very small fraction of the products of a once flourishing craft.

⁴⁹ Musée de Besançon. Another interesting piece: R. Renaud, *Revue arch. de l'Est et du Centre-Est*, VII, 1956, p. 292.

⁵⁰ *B.G.*, VI, 17.

⁵¹ As simple descendants in clay the vessels of the Bavai type may be considered. They are dated to the 1st-2nd century A.D., and perhaps a little later. H. Biévelet, *Latomus*, 1953, p. 158. M. Amand, *Latomus*, 1954, p. 40; 1955, p. 186; 1956, p. 347. M. Renard, *Latomus*, XIV, 1955, p. 202.

⁵² Livy XXXVI, 40.

Book Chronicle

We include here books which have been received for review, or books of importance not received for review, of which we have recently been informed. We welcome information about books, particularly in languages other than English and American, of interest to readers of ANTIQUITY. The listing of a book in this chronicle does not preclude its review in ANTIQUITY.

THE ANCIENT NEAR EAST. Edited by JAMES B. PRITCHARD. pp. 380 including 90 pages of plates. Princeton University Press (London, Oxford University Press), 1958. 40s. An anthology from two books by the same author, *Ancient Near Eastern Texts* and *The Ancient Near East in Pictures*.

THE PLEISTOCENE PERIOD. By FREDERICK E. ZEUNER. pp. 447, 80 figures. Hutchinson. London, 1959. 42s. A revised re-issue of Professor Zeuner's handbook first published by the Ray Society in 1945. Contains a new chapter on the Thames Pleistocene and some other recent developments.

KHIRBAT AL MAFJAR. By R. W. HAMILTON. pp. 380 including 258 text figures and 111 plates (5 in colour). Oxford University Press, 1959. £8 8s. An account of the excavations of the winter retreat or hunting lodge of an unnamed Arabian *amir* built in the Jordan Valley between A.D. 724 and 743.

[continued on p. 188.]

The A B C of the British Iron Age

by CHRISTOPHER HAWKES

In 1931 ANTIQUITY published an article on Hill-Forts by Christopher Hawkes which introduced to English readers the concept of Iron Age A, B and C. This article was commissioned by Dr O. G. S. Crawford, and it is appropriate that the present article, which in its original form was a lecture given to open the Conference on the Southern British Iron Age organized by the Council for British Archaeology and held in London in December 1958, is also being published in ANTIQUITY. It is in fact the reflections of the Professor of European Archaeology in the University of Oxford on what he wrote nearly thirty years ago.

THIS article is something both more and less than the lecture that it represents. The lecture was given in London last December to open the Conference on the Southern British Iron Age which is reported here below by Mr Frere (p. 183). But it had the disadvantage of all introductory lectures to conferences, that they cannot anticipate what the other speakers will be saying later. And in this case, what the others said later was sometimes so new and striking as to leave the introductory lecture rather far behind. Of course, that was the measure of the conference's success; yet I was gratified to find that what had happened, by the end, was that the others had not so much contradicted as carried further, in their various special fields, much of what was suggested in my more general talk. This surely means—and I think we can be gratified all round—that in the dozen years since the Council for British Archaeology last caused a general survey to be put forward,¹ or the twenty years since Childe was writing in *Prehistoric Communities*,² we have taken our Iron Age studies through a process of expansion, and of revaluation, and yet have emerged still pretty well together.

These milestones in their history are worth remembering. *Horae Ferales*, in which Kemble and Franks first brought our Iron Age metalwork to recognition, appeared in 1863, and John Evans's *Coins of the Ancient Britons* in 1864; Arthur Evans's monograph on the Aylesford cemetery, with both metalwork and pottery shown for the first time in their European setting, in 1890³; Canon Greenwell's on the Yorkshire chariot-burials in 1906.⁴ The first dozen years of this century brought the first three works of synthesis: Rice Holmes's *Ancient Britain* in 1907, Romilly Allen's *Celtic Art* in 1910, and, going more out of doors, Hadrian Allcroft's *Earthwork of England* in 1911. That same year saw J. P.

¹ In its *Survey and Policy* of 1947.

² London, 1940.

³ *Archaeologia*, LII, 2, 317 ff.

⁴ *Archaeologia*, LX, 251 ff.

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Bushe-Fox at Hengistbury Head,⁵ and the Cunningtons at All Cannings Cross, finding and for the first time recognizing Iron Age pottery of our earliest phase.⁶ The two great volumes on the *Glastonbury Lake-Village*, by Dr A. Bulleid and Mr H. St George Gray, appeared in 1911 and 1915. By the time that Reginald Smith's *Early Iron Age Guide* was published by the British Museum in 1925, the keynote of most of our new work—quite rightly—was regional study, an activity long encouraged by the old Congress of Archaeological Societies. It had been pioneered in Hampshire by J. P. Williams-Freeman,⁷ and was given a fresh standard in 1923 by Cyril Fox, in his famous *Archaeology of the Cambridge Region*.

By the end of the 1920s, all this regional work had created an urgent need for some common scheme of terminology. We needed one that should serve us better than the Continental systems, with which I like the rest of us had laboured, when surveying the field again for the Hampshire Field Club's volume on the St Catharine's Hill (Winchester) excavations.⁸ and in writing up its later phases, with Gerald Dunning, for *The Belgae of Gaul and Britain*.⁹ The result, embodied in the paper on 'British Hill-forts' which O. G. S. Crawford had commissioned from me for the March *Antiquity* of 1931,¹⁰ was the 'A B C' system. When, presently (at Smith's instance), Professor Bersu asked for a review of British Archaeology since 1914, outside Scotland, to be written for the *XXI Bericht* of the Roman-German Commission by T. D. (Sir Thomas) Kendrick, and Kendrick suggested that the later prehistoric and Roman periods should be done by me, I used the system again, the result in English being the Iron Age chapter of our *Archaeology in England and Wales 1914-31*. This appeared simultaneously with the German version in 1932, the year of the first International Congress of Prehistoric and Protohistoric Sciences in London. Thus fortunately sponsored, the system soon caught on.

But it was so simple that people soon wanted to elaborate it. In Sussex, more particularly, where the elder and the younger Dr Eliot Curwen had for some time been leading the whole country in regional Iron Age excavation and study of pottery, the system in due course gave us A1, A2, B, AB, two C's, a 'South-Eastern B' (contributed by Mr John Ward Perkins), and with it an 'ABC'.¹¹ The Glastonbury Lake-village culture was similarly called 'South-Western B', the Yorkshire chariot burials 'North-Eastern B'; Wheeler's Maiden Castle excavations provided yet another local 'B', and Kathleen Kenyon, in her Sutton Walls (Herefordshire) report, has since christened another in the region of the lower Severn and Wye.¹² To this very natural conception of different B's in different districts—the two C's just mentioned differ likewise geographically¹³—Dr Kenyon has added a scheme of regional grouping for the A culture.¹⁴ This urge for geographical division

⁵ 'Class A' in his *Report* (Soc. Antiquaries, 1915).

⁶ M. E. Cunnington, *All Cannings Cross* (Devizes, 1923); cf. Wheeler in *Arch. Journ.*, CVI, *Supplement* (Clapham Mem. Vol., 1952), 62 ff.

⁷ *Field Archaeology as illustrated by Hampshire* (London, 1915); cf. Hawkes in *Proc. Hants Field Club*, xx (1956), 14-22.

⁸ *Proc. Hants Field Club*, xi (1930).

⁹ *Arch. Journ.*, LXXXVII (1930), 150-335.

¹⁰ Vol. v (No. 17, March 1931), 60 ff.

¹¹ Ward Perkins, *Proc. Prehist. Soc.*, iv (1938), 151 ff., and *Archaeologia*, xc (1944), 153 ff.; cf. Hawkes in *Sussex Arch. Colls.* LXXX (1939), 252-8; A. E. Wilson, *ibid.*, xciii (1955), 59 ff., S. S. Frere in *Arch. Journ.*, ci (1944), 50 ff. On Sussex pottery generally: Wilson and G. P. Burstow in *Sussex Arch. Colls.*, LXXXVII (1948), 77 ff.

¹² *Arch. Journ.*, cx (1953), 1 ff.

¹³ They are the First C and Second C of pp. 181-2 below.

¹⁴ In her 'Survey of the Evidence' in *Univ. London Inst. Arch. 8th Annual Report*. (1952), 29 ff.

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is of course an entirely right one for A, B and C, all three. It only needs now to be carried a stage further and given a more systematic scheme of provinces and regions, valid both archaeologically and physiographically.

However, there is still another urge which one must feel: the urge for a soundly based chronology. A, B and C are a series of *cultural* entities, induced simply from the archaeological material. By definition, they begin one after the other; but they overlap and sometimes therefore influence each other, to varying extents in time. And in themselves, their internal features and connexions can give only *relative* chronological indications. This or that feature or connexion can acquire an absolute chronology, indeed, from an absolutely dated Continental counterpart, or an absolutely dated historical event, or from coins (whether British or Continental) dated by numismatic means. But nothing in British Iron Age archaeology carries an absolute date, unless this has first been given to it, directly or indirectly, from one of those outside sources. Happily, the sources are now rather more and better than they were. Today, therefore, I think we can reasonably draw up not only a geographical system for the British Iron Age—from about the Tyne and Solway southwards—but also a chronological one, and devise an improved terminology expressing both. I made a first try at this in 1954 for the International Congress at Madrid.¹⁵ At the Conference last December I made a second try. I believe that what I offer now may really prove acceptable, both in the geography and the chronology, and in the system of terms and names. At all events, I have tried to let facts do the work for me rather than opinions; and where they will not, to deal warily.

THE GEOGRAPHY: PROVINCES AND REGIONS (MAP, FIG. 1)

I call the major geographical divisions 'Provinces', and see five of them: a Southern Province and an Eastern, a South-Western and a Western, and lastly a Pennine Province—not a 'northern', because there will be more in Scotland. The boundaries of the Provinces are of course less precise in some districts than in others, but almost always physiographically clear. The Southern Province meets the Eastern along the East Anglian boulder-clay forest belt and in the Fens (with the Newmarket gap between), and along the marshy Welland. It leaves to the Eastern the rest of Lincolnshire, Yorkshire east and north-east of the Vale of York, and the basin of the Trent, short of the Derbyshire limestone moorlands. From the Welland the Southern border runs down the forest land on the far side of the Jurassic belt till opposite Wychwood Forest, then south across this and Braydon Forest beyond the Thames, by the Vale of Trowbridge to pass the Somerset limestone by the clefts about Castle Cary and so into the Somerset Plain, crossing between Ham Hill and the Blackdown Hills to the Axe and then the Channel. All west of this and south of Mendip is the South-western Province; from Mendip to the Mersey marshes, with all Wales, is the Western Province.

Within these Provinces there are lesser natural divisions that I call Regions. Of these I make thirty, and distribute them thus:—

Eastern Province: 1, Norfolk and borders; 2, Kesteven/Lindsey; 3, Eastern Yorkshire; 4, Trent basin.

Southern Province: 5, Nene/Cambridge; 6, Upper Thames; 7, Thames/Lea; 8, Chelmer/Ipswich; 9, East Kent/Medway; 10, Thames/Wealden; 11, South Downs (with Wight); 12, North Wessex; 13, Mid-Wessex; 14, South Wessex.

¹⁵ *Congr. Internat. Sc. Pré- et Protohistoriques, Actes de la IV Session, Madrid 1954 (1956)*, 729 ff.

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FIG. 1. British Iron Age Provinces (E., S., SW., W., Pennine) and Regions (1-30).

South-Western Province: 15, East Devon; 16, Dartmoor/Cornwall; 17, West Cornwall; 18, Exmoor/Quantock; 19, Mid-Somerset.

Western Province: 20, East Somerset; 21, Wye/Cotswold; 22, South Wales; 23, Mid-Wales; 24, West Wales; 25, North Wales; 26, Northern Marches; 27, West Midland.

Pennine Province: 28, South Pennine; 29, North Pennine; 30, Cumbria.

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These regions seem to me at once the largest and smallest that will contain, consistently with physiographic boundaries, an Iron Age archaeological entity in every case—whether well attested yet or not. Admittedly, in the last phases of the Age, some were cut up by land-grabbing. Yet others (as 1, 8, 11, 14, or 21), or groups of others, may be found forming cantonal or recognized tribal areas under Roman rule. It would be tedious here to beat all their bounds, and thrash out their inevitable local problems fully. But the story of the British Iron Age cannot be told without a map. And it is common knowledge that the Ordnance Survey, in the near future, will be bringing out the new *Map of Southern Britain in the Iron Age*, which its officers have in preparation. To that map, therefore, I would refer the reader who wants to see the lie of the natural features by which I make these boundaries run. Yet I do ask readers, even if disposed for argument about the Regions, at least to accept the Provinces. They are essential not simply to the geography of the story, but to the terminology as well.

THE CHRONOLOGY: PERIOD AND PHASES

I have said already that A, B, and C are cultures and not periods. That this has been less clear than it might have been was my fault at the outset, for I gave their full names as 'Iron Age A', 'Iron Age B' and 'Iron Age C'. What I meant, of course, was Iron Age A *culture*, B *culture*, and C *culture*. But while the word 'culture' was implied, it was not used. Thus, the terms have been all too easily misunderstood as meaning the Iron *A-age*, *B-age* and *C-age*; and since A, B, and C may overlap, people have had to think of the *Ages* as overlapping. Really, what overlap are the *cultures*, so the term 'Age' has to bear not an absolute but only a relative significance. For expressing absolute time, one is then left merely with the centuries, and though one wants to attach the scheme to these, it is awkward if one has nothing else. One has to use terms like 'Middle-sixth-to-late-fourth-century', or worse, 'Early-first-century-B.C.-to-second-quarter-of-first-A.D.'. This sort of patter becomes quickly maddening. One needs something like the convenient Roman Emperors and dynasties, which give Romano-British chronology its 'Claudian', 'Flavian', 'Antonine', and the rest. In Iron Age studies, hitherto, we have been trying to meet this need with my A, B, C; but they will not serve us, because they are only cultural terms. A, B, and C in fact need dates to be given *to* them, before we can take dates *from* them for our material.

I therefore propose three absolutely dated Periods, numbered 1, 2 and 3—or Iron 1, Iron 2, and Iron 3. Their dates are approximations, of course, but are really absolute, being taken from the Continent, where they stem from Mediterranean historical chronology. Here they are:—

Iron 1: *c.* 550–350 B.C.

Iron 2: *c.* 350–150 B.C.

Iron 3: *c.* 150 B.C. to beginnings of Romano-British culture, varying regionally from A.D. 43/4 onwards.

These periods and their dates are not meant to be changed. They are the horizontal bars of a fixed frame, as the Provinces and Regions are the vertical bars. What are meant to be changed, as knowledge advances, are the places within the frame that we assign to this or that manifestation of our cultures. In 1931, when A, B, and C were first propounded, there was not enough evidence for constructing periods; in 1947 there was more, but even in 1954 there was not yet enough. Only at the December Conference of 1958 was the evidence put on the table at last enough. The final contribution was Mr Derek Allen's, in his system for the British coinages (p. 186). Moreover, with this help from him in Iron

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3, and in Iron 1 and 2 with that of other foreign-based datings now available, we can subdivide the periods—again approximately, but certainly better than I could in 1954. I call the subdivisions Phases, and this is how I see them:—

<i>Period</i>	<i>Phase</i>
Iron 1, c. 550–350 B.C. (in France, Hallstatt II and early La Tène I)	{ 1a, c. 550–towards 400 1b, towards 400–c. 350
Iron 2, c. 350–150 B.C. (in France, middle La Tène I to middle La Tène II)	{ 2a, c. 350–300 2b, c. 300–200 2c, c. 200–150 { b i, c. 300–250 b ii, c. 250–200
Iron 3, from c. 150 B.C. onwards (in France, from middle La Tène II through La Tène III), to the various regional beginnings of Romano-British	{ 3a, c. 150–100 3b, c. 100–50 3c, c. 50 B.C.– A.D. 43/44 { c i, c. 50–15 B.C. c ii, c. 15 B.C.–A.D. 10 c iii, c. A.D. 10–43/44
	3d, A.D. 43–44 to subsequent regional beginnings of Romano-British (none later than c. 80 south of the Tyne and Solway).

I have put the Period numbers in Arabic numerals, the 1, 2, 3, that we all most naturally write. (Some people give the centuries Roman numerals, 'III B.C.', 'I A.D.'). Phase letters are small letters, to avoid confusion with the culture letters A, B, C.

THE CULTURES AND THEIR DIVISIONS

The most widely used division of one culture into two parts has been that of A into A1 and A2. It might seem natural to fit this to the Period scheme, by declaring that 'A1' was the A belonging to Period 1, and 'A2' to Period 2. But that will not do. What if an A occupation somewhere lasts from Period 1 to Period 2 practically unaltered? This possibility at once shows up the fallacy. The 1 of 'A1' is being made to denote both early cultural character and also early absolute date, in the hope that the one can never outlast the other. But it may! A second charge against the 'A1', 'A2' device is that it is shown up still worse if applied to Iron B. The B cultures distinguished up to now are not so much chronologically distinct as geographically; much the same applies to C. If we number them off as 'B1', 'B2', etc., we should be using the numbers in yet another sense, geographically; we have already got thirty geographical Regions, and with numbers flying about in so many different senses at once, we should soon go number-mad. What we need instead is a way of dividing A, B, and C which does not conflict with the Period numbers nor any other.

Happily, in English or any other grammar, there are two chief sorts of numbers. 'One, Two, Three' are cardinal numbers; it is these that we already have enough of. But the other sort remains, and these are the ordinal numbers, 'First, Second, Third'. They are really adjectives. They come before their noun not after. They are exactly what we want. We shall have not Iron 'A1' and 'A2' cultures but Iron First A and Second A; First and Second and Third B; the same for C; and no confusion with the Periods. Yet there are more than three B cultures. Who will want to toil round to 'Fifteenth B'? Happily again we can be delivered—by the geographical system of five Provinces. Fifteen divided by these five becomes again three only. Dr Kenyon has already begun to divide up A geographically,¹⁶ as well as B and C. So let A, and B, and C carry each their sequence of First,

¹⁶ See note 14 above.

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YEARS B.C. (A.D.)	PERIOD	PHASE	PENNINE PROVINCE			EASTERN PROVINCE				FRANCE (EAST & NORTH)
			30	29	28	4	3	2	1	
550	1	1a					SCARBOROUGH			I Halstatt
500							STAPLE HOWE		WEST HARLING	II Halstatt
450		1b								a
400	2	2a								b
350		2b i								Tène
300		2b ii								I c
250		2c								La
200		2d								Tène
150	3	3a								II La
100		3b								Tène
50		3c i								III
15		3c ii								Roman
A.D. 10		3c iii								
43		3d								

FIG. 2. Scheme for the Pennine and Eastern Provinces.

and Second, and Third, but divide these geographically by Provinces. I believe that this gives a smooth and clear terminology. One need not put in the 'Iron' every time, except in contrasts with Bronze Age or Romano-British. One will say 'Eastern First A', 'Southern Second B', 'Western Third C', 'Southwestern Third B', 'Pennine Second A', and so on. If Pennine A cannot yet be subdivided, one simply calls it 'Pennine A', and waits for more discoveries to bring it ordinals.

The whole array of determinable cultures, lastly, like the hanks of an embroiderer's coloured wools or silks, has to be stitched on to the net of absolute time, which our frame of Periods and Phases holds stretched between its bars. This is the way, it seems to me, to set about presenting our Iron Age as a living pattern. It remains to expound the pattern as a story. That is what I devoted most of last December's lecture to attempting. I will do my best to summarize it now.

PERIOD 1. *Iron First A, beginnings and duration.*

Before the Iron Age in southern Britain was the Late Bronze Age. Late Bronze 1 is quite remote from it, about 1000-750 B.C., and the heyday—as we can now declare¹⁷—of the so-called Deverel-Rimbury people. They had not much to do with the chief thing then happening in Western Europe, that is, the westward advance of what is named the Urnfield culture—the precursor of Iron Age civilization north of the Alps. In Late Bronze 2, how-

¹⁷ Margaret A. Brown (Smith), *Proc. Prehist. Soc.*, xxv (1959), 144, 156-62, 185; the same and also Hawkes, in *C.I.S.P.P. Actes V*, Hamburg 1958 (forthcoming).

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ever, the advance had brought this nearer.¹⁸ In the 8th–7th centuries B.C. we have a fringe of ‘Urnfield’ settlements—though still no actual urnfields (cremation-cemeteries)—over in south-eastern and eastern Britain. Beyond, natives and remaining Deveril-Rimbury folk lived on; but some finds of ‘Urnfield’ bronzes, especially wagon-parts and harness fittings, suggest adventurers farther north-west and north. On the Continent, meanwhile, Iron Age civilization in its turn was advancing westwards, in the form that is named the Hallstatt culture, from South Germany (about 700 B.C.) to East France (by about 650). It was thence carried south-west and south, and north into the Low Countries, but not yet as far west as Brittany. Now, already before 600, Hallstatt bronzes began to be brought to Britain, including swords (for not all at first were of iron).¹⁹ They are found not often but widely scattered from the south-east to the north-east. I think this indicates fresh adventurers. Around the south-west, there are more such Hallstatt bronzes, and with those in the Llyn Fawr hoard (Glamorgan) were a spear-head and sickle and Hallstatt sword of iron. In the Highland Zone generally, such signs of Hallstatt intrusion are not frequent. The native bronze industry went on. In the Lowland, on the other hand, it went out. Products of it might here and there survive, and could of course be used as scrap, but that is all. Instead, there are the Hallstatt bronzes and also something else: socketed axes imported from Brittany, widespread and in quite telling numbers.²⁰ These are a thing essentially of this century, the sixth B.C.²¹ They plainly tell that the Lowland Zone was no longer getting native Highland metal. Why? Surely because our Hallstatt adventurers were moving in—aliens to the country and its metal merchants. They were roving and spying out the land. They had bronze gear of their own; but what was more, they came already knowing iron. That Lowland Britain had ironstone in plenty, still virtually ignored, they soon found out. If enough of their own people would follow them over, good land could be taken, iron worked, and all this country settled. (The Brittany bronze axes, useful meantime, would then have served their turn.) Some, indeed, preferred to try the Highland country, mainly the west, where Llyn Fawr points again to iron-prospecting; or even Ireland. Yet that meant only infiltration. Lowland Britain could be colonized outright. Neither their Urnfield forerunners nor the remnants of older folk, with no use of iron nor near resource of bronze, could long prevent it. By the middle sixth century the colonists were coming.

The first French Hallstatt culture, Hallstatt I (= German ‘Hallstatt C’), was just then being improved in East France into Hallstatt II (= German ‘D’). The improvements spread thence outwards only partially, and not always quickly. Our colonists’ pottery, First A, most often has features of Hallstatt II, yet at times is still Hallstatt I (most obviously at Eastbourne)²²; that of All Cannings Cross has even Urnfield reminiscences.²³

¹⁸ In France, Late Bronze 3: see N. K. Sandars, *Bronze Age Cultures in France* (Cambridge, 1957). For Britain, see previous note (Hamburg Congress), and *Antiq. Journ.*, xxvii (1957), 131 ff., 143, 187–90.

¹⁹ *Ibid.*, 188–90, and xix (1939), 375–6; J. D. Cowen in *Proc. Prehist. Soc.*, xviii (1952), 129 ff.

²⁰ Cyril Fox, *The Personality of Britain*, ed. 4 (Nat. Mus. Wales, 1943), 23, pl. X (a); E. Sprockhoff, 31 *Bericht Röm.-Germ. Kommission* 1941 (1942), II, 120, Abb. 89.

²¹ They only just overlap the Breton ‘carp’s-tongue complex’ (Savory in *Proc. Prehist. Soc.*, xiv (1948), but see Cowen and Hencken in *C.I.S.P.P. Actes Madrid*, 1954, 639, 679, with *Zephyrus*, vii, 2 (1956), 125 ff.: its date is broadly 7th century). And next, they have Hallstatt associations: P. du Châtellier, *Les Ép. préhist. et gaul. dans le Finistère* (Rennes, 1907), 133–4, Guénoc hoard; P. R. Giot, *Bull. Soc. préhist. fr.* 1950, 338, Saint-Urnel-en-Plomeur. See also *Ampurias*, xiv (1952), 81–118, with refs.: Brittany trade to ‘island of Albion’ attested now, from Atlantic traders’ reports, by the Greek ‘Massaliote Periplus’ preserved in the antiquarian *Ora Maritima* of Avienus.

²² *Antiq. Journ.*, II (1922), 354 ff.

²³ With Cunnington (note 6), pls. 28–9, cf. Sandars, *Br. Age Cultures in France*, 215, fig. 54. Longbridge Deverill Cow Down (p. 183 below, Miss Chadwick) starts as an early First A site also.

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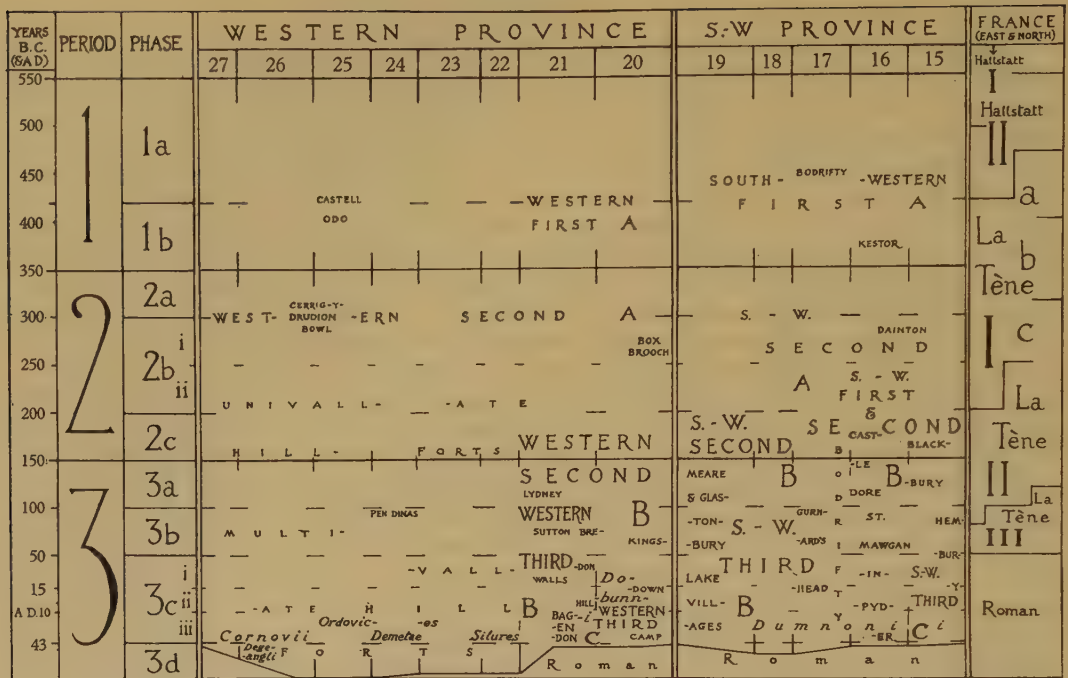


FIG. 3. Scheme for the Western and South-Western Provinces.

Of Hallstatt II metalwork we have a little,²⁴ but the classic East French brooches never even reached the Channel.²⁵ The colonists' homes were partly in the Low Countries (even beyond), whence the Hallstatt I bronze razors of Staple Howe (p. 183) can have come as late as c. 500, and partly in France outside the East.²⁶ From France they are harder to date. In and around Brittany, Hallstatt need not have succeeded the socketed bronze axe phase till after 500. Yet neither Brittany nor Cornwall, with iron as well as copper and the famous tin, eluded it much longer.²⁷ The Greek explorer Pytheas, in the 4th century, plainly found Iron Age culture flourishing in both, and we now have a Cornish First A type-site at Bodrifty.²⁸

Our Hallstatt colonizing era, then, after the essential prelude of 'adventuring', ran from about 550 till towards 400: Phase 1a. It brought First A culture in varying forms to much of the Southern Province, of the Eastern (whence the Pennine got it next),²⁹ of the South-

²⁴ *Antiq. Journ.*, xxxvii (1957), 191-8.

²⁵ See Dunning's map for Wheeler in E. Eyre's *European Civilization*, II (London, 1935), 241, fig. 13; the 'London' spot is agreed now to be dubious. The Italian-type brooches found stray in Britain are still obscure, but may partly have made good the Hallstatt II deficiency; see D. B. Harden in *Atti I. Congr. Internaz. di Pre- e Protostoria Mediterranea*, Firenze 1950 (1952), 315-24.

²⁶ E.g. the region north of the Loire which would have given them haematite for pottery-coating: K. P. Oakley in Wheeler's *Maiden Castle* (Soc. Antiquaries, 1943), 379 ff.

²⁷ P. R. Giot, *Bull. Soc. préhist. fr.* 1950, 338; Jacquetta Hawkes, *Archaeology of Jersey* (Soc. Jers. 1939), 121-2, 259 ff., Ville-ès-Nouaux cremation-cemetery.

²⁸ Miss Dorothy Dudley in *Arch. Journ.*, cxiii (1956) 1 ff.

²⁹ Dudley Waterman and others in *Yorks Arch. Journ.* 151 (1954), 383 ff.: Grafton, and Roamer Common (Masham).

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western, and also—to judge by Castell Odo (p. 183)—to parts of the Western coasts. The latest colonists of Period 1 came in Phase 1b. Their pottery, as at Long Wittenham on the Upper Thames,³⁰ shows them already just touched by the Continental culture that followed Hallstatt. This was the La Tène culture, which arose within the 5th century on both sides of the Rhine, and quickly reached East France.³¹ Its first British reflections are not numerous, but are clear—this pottery, some early La Tène I brooches, the ‘Early Style’ daggers noticed by Mr Jope below (p. 184). They should be placed before 350.

PERIOD 2. *Iron Second A, and First and Second B (with ‘AB’)*

The First A people, like their western Hallstatt fathers, were without doubt Celtic. La Tène civilization was wholly Celtic, and in this period it more and more affected Britain. When Second A follows First A, it has two main characters. First, internal development from First A: ring-headed instead of Hallstatt swan-neck pins,³² and ‘devolution’ in pottery. Secondly, more La Tène influence from the Continent: in pottery, foot-ring instead of Hallstatt omphalos bases, and cordons instead of Urnfield-Hallstatt furrowing. Ornament on pottery and metalwork (La Tène I brooches) shows the linear and dotted conventions of the La Tène ‘Early Style.’ These things all begin in Phase 2a, and the influence came from trading and social contact. No fresh immigrants are needed for the Minster Ditch (Oxford) scabbard, nor to found a Little Woodbury. Yet our first big La Tène bronze, the Cerrig-y-Drudion hanging bowl,³³ is exotic, and is decorated in the second La Tène style, the ‘Waldalgesheim’, which arose about 350; rather like it are the Wisbech scabbard and the Box La Tène I brooch.³⁴ Thus new immigrants before 300 are conceivable. In general, however, curvilinear La Tène work in Britain must on all grounds be dated from 300 onwards, starting with Phase 2b. Then (and not from 250) began the invasions of the so-called Marnians.

The culture they brought, from north-east France or farther, is our First B, Southern and then Eastern. The Southern has pedestal and carinated vases, Swiss bent silver ring, and La Tène Ic brooches.³⁵ What of westerly invasions too? We know scarcely anything of Wales at this time; the Second A hill-forts, now multiplying throughout the Southern Province, have counterparts in the Northern Marches, but not too closely dated. The South-Western Province, as well as its Second A (Dainton, Devon), and its mysterious Spain-Portugal connexions, has also Brittany invaders within Phase 2, whose best pots, as at Castle Dore,³⁶ have La Tène scroll ornament but are hard to date very early. Chun Castle, the Harlyn Bay inhumation cemetery, the Cornish and Dartmoor settlements, and the hill-slope forts,³⁷ are not yet interrelated clearly. East Devon, nearest to the Southern Province, and with hill-forts not dissimilar, has at least one built by B folk mixed with

³⁰ H. N. Savory, *Oxoniensia*, II (1938), 8 ff.

³¹ Beginnings all slightly earlier now, chiefly on account of the Mont-Lassois, Vix, and Heuneburg discoveries (cf. *Antiq. Journ.*, xxxvii, 196–7), than when Mr. de Navarro wrote on them for Wheeler’s *Maiden Castle* (1943), 388 ff., or Paul Jacobsthal in *Early Celtic Art* (Oxford, 1944).

³² G. C. Dunning in *Arch. Journ.*, xci (1934), 278 ff. On brooches, see Margaret Fowler, *ibid.*, cx (1953), 88 ff.

³³ Cyril Fox, *Pattern and Purpose: Early Celtic Art in Britain* (Nat. Mus. Wales, 1958), 1–2, fig. 1.

³⁴ *Ibid.*, fig. 2, and 16–17, fig. 13d (but the scroll needs drawing on the flat to be appreciated).

³⁵ Hawkes in *Antiq. Journ.*, xx (1940), 115–21, and *Sussex Arch. Colls.* Lxxx (1939), 217–62; but is not all Park Brow I of Period 2?

³⁶ C. A. Raleigh Radford, *Journ. R. Inst. Cornwall*, n.s. 1, *Appendix* (1951). His general review of the Southern British Iron Age, *Proc. Prehist. Soc.*, xx (1954), 1 ff.

³⁷ Aileen Fox in *Arch. Journ.*, cix (1952), 1 ff.

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YEARS B.C. (B.A.D.)	PERIOD	PHASE	S O U T H E R N P R O V I N C E										FRANCE (EAST & NORTH)
			14	13	12	11	10	9	8	7	6	5	
550	1	1a				EAST- BOURNE							I Hallstatt
500			S	O	U	T	H	E	R	N			II
450		1b	HENGIST- BURY (A)	ALL	HIGH DOWN	DEAL	COL-	WALTHAM-					a
400				F	I	R	S	T	-ER	-CHEST-	-STOW		La
350	2	2a									LONG WITTENHAM		b Tène
300		2b	S	O	U	T	H	E	R	N			I
250			MAIDEN CASTLE I.	LITTLE	-INGS	SOUTH- PARK	O	N	D	FIRST	CHIN- NOR	B ^U WIL- BECH A SCABBARD	c
200		2c	II.	S	CROSS	U	T	H	E	R	N		La Tène
150	3	3a	SOUTHERN THIRD III.	-BUR-	SOUTH-					BATTERSEA SHIELD?			II La
100		3b	IV, Duro-	-S	-E	-C	F	O	N	D	F	R	Tène
50			SOUTHERN -triges THIRD	-SECOND CAST- Atreb-	-EASTERN	-AYLES- FORD	Trino-	WHEAT- HAMSTEAD	Calu-				III
15		3c	III	THIRD	-ER-	C ² at-	THIRD	-B	-ING	COLCHEST-	-ER	WOOD	Roman
43		3d	C	-LEY	-e s								

FIG. 4. Scheme for the Southern Province.

natives, Blackbury Castle.³⁸ Its 'barbican' recalls that of Maiden Castle at its second stage (South Wessex), also of Period 2, which however was a local Second A work. Such mixtures of new B folk with A natives need a fresh descriptive term, not in the south-west only, but in general. The usual term has been 'AB'. I think it should always have a geographic adjective, and be restricted to sites where B elements still stand out as strangers beside the native A. The culture of Dr Kenyon's Breedon-on-the-Hill, which certainly starts within Period 2,³⁹ and has A-like scored pottery with B rotary querns, might thus be called 'Trent AB'.

Normally, this stage was transitional: it led to an amalgamated culture, with the A indissoluble from the B. It is this that has usually been called 'AB': the later Trundle or Newhaven Castle Hill⁴⁰; the later Little Woodbury, with smooth dark ware supplanting haematite; Southcote, Frilford, the later Hunsbury.⁴¹ But this culture runs into Period 3. Its art in metal shows purely British schools, which are yet of La Tène tradition; its pins and its novel brooches—elongated, involuted, inflated, or penannular—are original. Its bivallate or multivallate fort-defences, if we follow Mr Rivet (p. 185), are original too. I

³⁸ Alison Young and K. M. Richardson, *Proc. Devon Arch. Expl. Soc.*, v, 2-3, (1954-5), 43-67.

³⁹ *Trans. Leics. Arch. Soc.*, xxvi (1950), 17 ff. The penannular brooch, fig. 7. 2, is of the early thick-hooped type (cf. W. Watson in *Antiq. Journ.*, xxvii (1947), 178 ff.), and the querns need no longer be dated late by Maiden Castle (p. 181 below).

⁴⁰ See note 11.

⁴¹ J. W. Brailsford, *Proc. Prehist. Soc.*, xiv (1948), 1 ff.; C. M. Piggott and W. A. Seaby, *ibid.*, iii (1937), 43 ff.; Clare Fell in *Arch. Journ.*, xciii (1936), 63 ff., with W. F. Grimes in *Aspects of Archaeology: Essays presented to O. G. S. Crawford* (ed. Grimes, London, 1951), 164-6; and on decorated pottery, *Proc. Prehist. Soc.*, xviii (1952), 160 ff.

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therefore call it Second B. It is the British counterpart of La Tène II culture abroad; but when that was forming, from about 250 onwards, it had begun to develop independently. In the south, by the end of Period 2, it was nearly universal. Eastern Second B is the 'Arras culture' of the Yorkshire graves, with eastern metalwork continuing into Period 3. Western Second B was by no means universal, and perhaps did not develop before Period 3; Lydney (west Gloucestershire) is a familiar type-site. To South-Western Second B we shall return.

PERIOD 3. *Second B and Third B; First C, Second C, and Third C.*

In the 2nd century, the Continent took a hand in Britain again. For instance, before the end of Period 2, swords and scabbards of La Tène II type were being made here.⁴² It is in these, indeed, that we first see the new British style of engraved decoration, which from Phase 3a—a possible date for the Llyn Cerrig plaque as well—went on to create the 'Mirror Style'.⁴³ But now from Belgic Gaul, where 'Germanic' irruption was starting to upset the old Marnian culture, there was brought to the Lower Thames country our first wave of gold coins—Allen's Gallo-Belgic A (p. 186), dated from about 150. There and occasionally beyond, too, we have a few La Tène II brooches and fresh swords. The second wave followed, and the third, dated from about 100, brings us to the time—after Rome had conquered Provence, and repulsed the Cimbric invaders from the North—when the leading parts of Gaul were moving from La Tène II to La Tène III culture. This, with its wheel-made cordoned pottery and the rest, is what we have in south-eastern Britain as Iron C—First C we now must say—following the early coins. The whole sequence stands for invasion from Belgic Gaul, which is vouched for independently by Caesar. These people came first to plunder, he recorded, and only afterwards to settle.⁴⁴ Have we any Belgic pottery as early as the coins, of Phase 3a? In 3b, anyhow, we have our classic First C sites and cremation cemeteries, continuing through 3c: Aylesford and Swarling, Shoebury, Wheathampstead, and so on. The first two waves of coins, thus, should mean primarily warlike lodgments in the land, leading on to more solid settlement with the third. Yet this is a great change from our old date '75 B.C.' for the first invaders. We have Belgae of some sort round the Lower Thames from 150 onwards. Moreover, there are in several quarters 'late' B cultures—further to the Second B that we know already—which must be up-dated too. Not necessarily farther than Phase 3b, for they mostly have La Tène III elements: they will be Third B cultures. The 'South-Eastern B' pottery, and Sussex 'A B C' (p. 171), make a South-Eastern Third B, developed from the Wealden form of Second B, and with refugees from Caesar as its last recruits. Such refugees brought in a further wave of Gallo-Belgic coins (Mr Allen's E). Yet others, from Brittany this time, have been credited with the B culture of South Wessex, centred on Maiden Castle. But the tribe there was the Durotriges, and their silver coins were being issued already before Caesar's coming. Mr Allen has up-dated them as he has their Gallo-Belgic prototypes; furthermore, they appear in the new Le Câtél hoard in Jersey, which is itself of Caesar's time (p. 186).⁴⁵ This B is thus pre-Caesar. It is a local variant of Southern Second B with Brittany trade contacts, arising as early as Phase 3a, and best named Southern Third B. What Brittany refugees from Caesar *can* have helped to form was the local C: its pottery has types clearly

⁴² Stuart Piggott, *Proc. Prehist. Soc.*, xvi (1950), 5 ff. (Group II); on dating, cf. xxi (1955), 211–12.

⁴³ Fox, *Pattern and Purpose*, 84–105; plaque, 33, and his *Find of the Early Iron Age at Llyn Cerrig Bach* (Nat. Mus. Wales, 1946), 46 ff. Are not the 'up-dating' considerations observed below (pp. 181–2) consistent with an earlier start, i.e. a less rapid pace, for the artistic sequence that he has traced and there expounded?

⁴⁴ *De Bello Gallico*, v, 12, 1–2. On Caesar's British expeditions, 55 and 54 B.C., see C. E. Stevens, *ANTIQUITY*, 1947, 6 ff.

⁴⁵ J. Colbert de Beaulieu in *Proc. Prehist. Soc.*, xxiv (1958), 201–10.

derived from what were theirs till Caesar came, as Wheeler showed by his Brittany expedition.⁴⁶ This Southern Third C, therefore, was formed in 56/50 B.C., not later.⁴⁷

The B of the South-Western Province, when we meet it in the Glastonbury Lake Village, has become a nearly complete La Tène III culture, extended from Cornwall and Devon to the Mendips. In this final stage, it should be called South-Western Third B. Its progression from the Second B stage will belong to Phase 3b, being connected with the trade from Brittany recorded by Caesar (who stopped it in 56), and reflected in Cornish cliff-castles and in cordoned pottery.⁴⁸ Cornwall, no later, received some of the 'duck'-impressed ware, of apparent Spain-Portugal affinities, which is found (slightly varied) at some hill-forts in the Western Province, mainly the west Cotswolds and in Herefordshire.⁴⁹ This surely does mark there an intrusive culture: Western Third B. It intruded among the local Second B folk and in the Cotswolds was dislodged within Phase 3c, in Herefordshire by the Romans. Elsewhere in the Western Province, there was by then something that might be called 'Western AB', did we know more of it. But the basic culture here was what Mr Hogg has called 'Secondary', belonging to descendants of Bronze Age natives; the Pennine Province had something similar, but eventually a touch of C as well.⁵⁰

The history of C in the South, finally, can be followed from both coins and sites. First C became the Catuvellaunian realm, stretching at last, under Cunobelin, from Essex and Kent into the Midlands. Districts of Eastern Third C, beyond it, are indicated here and there, but otherwise we may think of the Iceni, if not the Coritani too, as variously Eastern Second and Third B. Second C, from West Sussex to the Middle Thames, was created by Belgae coming probably from several quarters, in Sussex probably first before Caesar, and at latest by refugees from him. The sequel, filling all 3c, was the realm of Commius and his sons, and outliers from it west in Wiltshire. From this, the East Somerset and Cotswold regions derived what I call the Western Third C culture, which history and coins assign to the Dobunni. In 3c iii, Cunobelin's time, the Cotswold Dobunni at least were allied with the Catuvellauni, as the Bagendon excavations have shown.⁵¹ There are C sites between them on the Upper Thames. The story is now passing into history. One can memorize 3c i by the coming of Commius, about 50 B.C.; 3c ii by the creation of commerce with the Roman Empire, about 15 B.C.⁵²; and 3c iii by Cunobelin, from about A.D. 10. And last there comes 3d, and the Roman Empire's domination.

⁴⁶ R. E. M. Wheeler and K. M. Richardson, *Hill-Forts of Northern France* (Soc. Antiq., 1957); cf. *ANTIQUITY*, 1958, 154 ff.

⁴⁷ Despite J. W. Brailsford, *Proc. Prehist. Soc.*, xxiv (1958), 101-19. It has a Belgic element too.

⁴⁸ This will then start earlier (as at the Gurnard's Head cliff-castle, *Arch. Journ.*, xcvi (1940), A. S. R. Gordon) than Mrs. Murray-Threipland has suggested in reporting on the St Mawgan-in-Pyder excavations, *Arch. Journ.*, cxiii (1956), 33 ff., 53 ff.

⁴⁹ Bredon Hill: Thalassa Cruso Hencken in *Arch. Journ.*, xcv (1938), 1 ff.; Sutton Walls: K. M. Kenyon, *ibid.*, cx (1953), 1 ff.

⁵⁰ A. H. A. Hogg, *ANTIQUITY*, 1958, 189, with W. J. Varley, 'The Hill-Forts of the Welsh Marches', *Arch. Journ.*, cv (1948), 41 ff.; Pennine: R. E. M. Wheeler, *The Stanwick Fortifications* (Soc. Antiquaries, 1954).

⁵¹ By Mrs E. M. Clifford; to be published shortly as a monograph. Cambridge: W. Heffer & Sons, 1960.

⁵² For this, see once for all C. E. Stevens, in *Aspects of Archaeology* (1951: see note 41) 332-44.

The Iron Age in Southern Britain

by SHEPPARD FRERE

The Council for British Archaeology organized a conference in London in December 1958 on 'Problems relating to the Iron Age in Southern Britain'. The previous article in the present number of ANTIQUITY represents the modified substance of the opening lecture. Here Mr Sheppard Frere reports on the conference as a whole and assesses its achievements.

THE Iron Age and Roman Research Committee of the Council for British Archaeology organized a conference on 'Problems relating to the Iron Age in Southern Britain', which was held at the Institute of Archaeology from 12 to 14 December, 1958. A full report on this Conference is to be issued by the C.B.A. in the form of an Occasional Paper of the Institute of Archaeology; all that is here attempted is a short summary of the main points made.

The Conference began on the evening of Friday, 12 December with a brilliant introductory lecture in his best manner by *Professor C. F. C. Hawkes* entitled *The ABC of the British Iron Age*. This lecture is represented by the paper printed here above (pp. 170-82), and thus no summary is necessary, though it would be difficult to overestimate its stimulating influence on the remainder of the Conference's proceedings.

On Saturday, 13 December, the first morning session was devoted to five short reports on *recently excavated settlement sites* of outstanding importance. *Mr T. C. M. Brewster* described *Staple Howe*, E. Yorks, a remarkable farmstead site which produced three Hallstatt C razors; there was a palisade of three phases bounding three round or oval huts and a well-built granary 9 ft. square. The full report on this site is to be published as a monograph this summer.

Miss S. E. Chadwick described the site at *Longbridge Deverill Cow Down*, Wilts, where a still-visible Iron Age 'A1' D-shaped enclosure (A), about 1 acre in extent, was secondary to a penannular ditch (B) now visible only as a crop-mark. The chief interest of the site was a fine circular porched house 50 ft. in diameter lying in the entrance of A, having strong resemblances to the Little Woodbury house except that it lacked the central square frame of the latter. It contained an emplacement for a (?) loom. Enclosure B contained storage-pits, working-hollows, post-holes, and pottery of a more extended date-range.

Mr G. A. Holleyman described excavations at *Muntham Court*, Findon, Sussex. This site produced a Romano-British shrine, but around and below it was a maze of post-holes belonging to Iron Age A and B, many of them renewed, together with a palisade. The chief feature was a series of groups of six large post-holes, suggesting granaries; these post-holes were never found to be recut. The other post-holes were too numerous for elucidation: only one storage-pit was found.

Mr L. Alcock spoke on *Castell Odo*, Caernarvonshire. The site was surrounded by two banks without ditches, an embanked settlement not a hill-fort. The outer bank was secondary and sealed 'situlate' finger-printed pottery; inside were seven huts, roughly circular, one of which (in its first phase) could be shown to be contemporary with the inner bank. The evidence suggested maritime settlers of the 5th or 4th century.

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Professor W. F. Grimes briefly described the sites *Draughton*, Northants, *Twyford Forest*, Colsterworth, Lincs, and *Heath Row*, Middlesex. *Draughton* was a ditched enclosure only 115 ft. in diameter. It contained three huts (one 30 ft.) much larger than the others; the site was boggy and drip-water gullies, sumps and drains were provided. The inhabitants were concerned with iron-working and their pottery contained two elements, a Trent Valley rough A tradition and a scroll-decorated B tradition derived from the north-east. *Twyford Forest* was of later date, Belgic-Roman transition; there was one large house and at least four small ones not evenly distributed over the enclosure; once again drip-gullies were provided. This type of site was further illustrated by those at *Heath Row* and *Stanton Harcourt*, the latter a good example of a very numerous class of dwelling-site, low in the social scale, with only one hut and a limited period of occupation. Complete excavation of such sites was desirable if their significance for social organization was to be appreciated.

The second morning session was taken by *Mr E. M. Jope* on *The Beginnings of La Tène Ornamental Style in the British Isles*. The value of the study of Celtic Art lay in the light it threw on the wealthier classes, the leaders of the invasions. In Britain we were short of grave-groups and knew far more about the peasants than about the *equites*, a contrast to the state of knowledge on the Continent. Yet archaeology might be a poor guide to the earliest princely intrusions, as the archaeological record of early 4th-century Italy warned us. Moreover, so much of the British material lacked associations and had to be dated stylistically: the great majority of it also had a markedly insular character, but derived from the continental transition from La Tène I to La Tène II (in general terms about 250 B.C., though the transition was in fact long drawn out and not over till c. 200 B.C.). The origins of the style could derive from (a) imported objects copied, (b) craftsmen imported, (c) native craftsmen sent abroad to train. Only (b) was supported by evidence. Mr Jope made a plea for bold dating; objects should be dated in the framework of continental evidence without compromise.

Before the main run of British Art begins, there is a prologue illustrated by the well-known daggers or eating-knives, many of them found in the Thames; some of these are imported but others are certainly of native manufacture, so that in Phase 1 we have already a flourishing school of metal-workers here, able to do the highest-quality work. A few other scattered objects, some imported, such as the Cerrig-y-Drudion bowl, some produced here, such as the Woodendean pig, also go back before 300 B.C.

The characteristics of the insular style, once started (in the later 3rd century), can be appreciated on masterpieces few in number but first-rate in quality such as the Torrs ornament, the Wandsworth and Witham shields and finds also from a number of Irish sites, e.g. Lisnacroghera. (Mr Jope pointed to a number of details showing technique of manufacture and stylistic affinities.)

The Irish finds however often point to separate continental connections, independent of British sources yet equally early in the 3rd century. In this phase we seem to see a whole series of intrusions of small groups of warriors, and the detailed relationships are not always apparent. In particular there is still a great gap separating the continental chariot burials of La Tène I (5th-4th centuries B.C.) from those of Yorkshire (mid-3rd century at the earliest). Even the Irish three-link bits are only late 3rd century, at the earliest. Perhaps new work west of the Seine may yet produce the connection.

On Saturday afternoon there was a session devoted to *Some Problems of the Hill-Forts*, with addresses by *Mr A. F. L. Rivet*, *Lady (Aileen) Fox* and *Mrs M. A. Cotton*. Mr Rivet was concerned with classification and spoke from his experience with the new O.S. Iron Age Map. Of the 1386 fortifications on the sheet (south of the latitude of Scarborough) 793 were of less than three acres: some 600, however, were true hill-forts, but only 166 of

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these had been dug into. Classification therefore could not be based on excavated characteristics such as timber revetments and the intricacies of entrances. This left as criteria: (a) Cultural affinities, where known. (On the map, hill-forts are assumed to be basically A, AB, or B unless proved otherwise.) (b) Number of ramparts. The distinction is here between univallate and multivallate, the criterion usually being the presence of a second ditch; but a 'bivallate intention' can sometimes be recognized even where such a ditch is absent. In Britain there are two chief areas of multivallation which may be called primary, the South-West and Wessex. But in the latter, multivallation (as far as is known) is almost always an addition to a univallate stage in the hill-fort, whereas the South-West can produce original multivallation very close in character to examples in Brittany. The Wessex multivallation (with its quite different scale) is unlikely to owe much to the Veneti, even if chronology did not now make the refugee connection impossible. It is perhaps an insular development. Multivallation is a better form of defence *whatever* form of warfare is involved, though in the case of slingers excessively high outer ramparts may give the attackers a positive advantage. Maiden Castle perhaps represents a late adaptation to sling warfare of forms of defence designed for other purposes. (c) Area. Classification by size will demonstrate differences in the social scale within the *same* region, and also differing social organization between *different* regions e.g. between corn-producing Wessex and the cattle-raising South-West.

Mr Rivet pointed out the almost complete absence of Hill-Forts in E. Yorks, Lincs, and E. Anglia, precisely the area of the chariot burials, a fact which has interesting implications both for the A and B cultures in those areas.

Lady Fox spoke of hill-forts in the South-West. There is a division at the Exe; east of this river multivallate hill-forts continue from Wessex, but west of it lies a different group with wide-spaced ramparts, each fort thus consisting of two or more enclosures.¹ Such forts may be on either hill-tops, plateaux or promontories, but in many cases are overlooked by higher ground. The double enclosures are of two kinds: one is an elaboration of the entrance ('barbican'); the other, a large outer enclosure, is to protect cattle from raiders. They reflect a different way of life to that of Wessex, the life of pastoralists, and the distribution suggests a different continental origin, somewhere on the Atlantic sea-route. They represent the defended dwelling of the chieftain and his kin, and his large herds are kept in an adjoining enclosure with easy access to the spring, and to the leaves and acorns of the steep dividing valleys. Political life in the west developed slowly, and as late as Pytheas the natives were peaceable and welcoming to strangers. This group of hill-forts represents one of the ingredients which went to make the later Dumnonii.

Mrs Cotton said that during Phase 1 there was no marked regional differentiation in hill-forts: but during Phases 2 and 3 localized groupings did become recognizable. In the South-West, in addition to the multiple enclosures described by Lady Fox, a second category of hill-fort could be recognized, sub-divisible as follows: (i) stone revetted rampart; (ii) single stone wall; (iii) multiple stone walls. There was too little information at present available on the date or origins of these types.

In South-East England there were two late groups of hill-forts, designated after Oldbury I and Oldbury II. The former type appears on both sides of the Thames estuary; they were perhaps local attempts to prevent the first Belgic settlements. The latter type represented refortification of earlier sites, often with a widened ditch and partial bivallation. These refortifications were consistently late, and have often been dated to the time of the

¹ E.g. Castle-an Dinas, Clovelly Dykes, or Hall Wood, Pelynt.

Claudian conquest, though this seemed to leave unaccounted for the numerous war scares in this region caused by conquering Belgic dynasts.

On Saturday evening the Conference was treated to a notable display of air-photographs by *Dr J.K. St Joseph (Iron Age Archaeology: the evidence of air-photography)* covering the whole range of the field-monuments. Some views—a small hill-fort with its farm within, details of Hod Hill, or a Thames Valley site with innumerable superimposed small farms—were especially unforgettable.

On Sunday morning, 14 December, the first lecture was by *Mr S. S. Frere on Some Problems of the Later Iron Age*. These problems were mainly chronological. The 1st century B.C. had become filled up and congested with a wide variety of material: what could be done to relieve it? There was a case for pushing the first Belgic invasions back to 100 B.C. or beyond. The Caesarian evidence supporting the date *c.* 75 B.C. was not as weighty as was sometimes held; the earliest coins, usually taken to mark pre-settlement trade, in reality reflected the settlement pattern of the Belgae themselves; and the existence of chariot warfare among the British Belgae (though it had totally disappeared in Caesarian Gaul) demanded a date well before 75 B.C. for their arrival. There was evidence for war-chariots in Gaul as late as Poseidonius (*c.* 100 B.C.) but no later. The chief obstacle to sound chronology now was the date 56 B.C., once welcomed as a needed fixed point. But now too much was attached: as well as 'Dorset' B, cultures as diverse as 'Bristol Channel' B and South-Eastern B had been yoked to this date and to a source among Breton refugees. The Le Câtillon hoard had destroyed the accepted short chronology of Iron Age C in Dorset. The C phase there should go back now as far as (if not behind) Caesar's Gallic Wars, and behind that again 'Dorset' B had to be pushed well into the 2nd century. That in turn might relieve the pressure on La Tène I brooches as well as on the whole question of cross-Channel relationships. What were needed were groups datable to the 2nd century, and they could best be looked for in the Second B of the South-East, which occupied an area later overlaid by the earliest Belgic settlements. A beginning had been made at Keston where a 2nd-century pottery group included a dumpy Wealden pedestal. Such a link with Park Brow, so dated, had long been required to support the interpretation of the Later Iron Age of the South-East put forward in 1939 by Professor Hawkes.

The second lecture, perhaps the most important original contribution to the Congress, was by *Mr D. F. Allen on The Origins of the British Coinage: a reappraisal*. Mr Allen re-examined the uninscribed gold coins found in Britain and reclassified them under groups: A-F, *Gallo-Belgic* (continental in manufacture), and groups A-R, *British* (struck here). These, now freshly mapped, give a completely new picture of the complexity of the Belgic invasions, a process of movement which began well before 100 B.C. Coherent tribal areas had not yet appeared: what we see is a process of movement and settlement, not necessarily of more than the dominant higher strata of society. The earliest coins, Gallo-Belgic A ('Bellovaci'), still retain a recognizable Apollo-head, nor has the horse yet become a dis-integrated pattern; Mr Allen, rejecting Brooke's derivation via Marseilles, suggested that they reflect a time before the germanization of Belgic Gaul had proceeded far (third quarter of the 2nd century B.C.). The earliest British classes, A-K, derive from Gallo-Belgic C ('Atrebatas'), and though the latter has no fixed date of its own, evidence from British derivatives now drives Gallo-Belgic C back to 100 B.C. Gallo-Belgic E ('Morini') appears to reflect a major surge of invaders or refugees about the time of Caesar's Gallic Wars, and the distribution and chronology of these coins more nearly suits Cassivellaunus than does the later Whaddon Chase (British L) type. Gallo-Belgic F ('Remi'), usually associated with Commius's invasion, are post-Caesarian since the gold prototypes do not appear in Britain, and this must be due to Caesar's suppression of the gold issues of independent

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Gaul. Within Britain itself the coins display much movement and interplay, and surprise us by appearing thickly in areas usually counted as non-Belgic: the significance of all this, whether due to short-lived empires of warring chieftains or other causes will have to be studied.

British A ('Westerham') and British B ('Chute'), both deriving from Gallo-Belgic C, were jointly predecessors of the Durotrigian silver staters; at the same time British O, deriving in Sussex from Gallo-Belgic D, was adopted as the pattern for Durotrigian silver quarter-staters; and both types of Durotrigian coin appear in the Le Câtillon hoard. The evidence for Belgic movement thereafter into Dorset is clear, and the Le Câtillon evidence suggests that it was the large-scale movement indicated by Gallo-Belgic E which was responsible for the necessary pressure.

Other British groups derived from Gallo-Belgic C are found penetrating East Anglia, the Wash and possibly the Humber, and circulating for long periods in these regions. British L ('Whaddon Chase'), the first British coinage of the central area, appears to derive from these northern groups; it was itself the ancestor of the coinage of Tasciovanus, Addedomaros, and of the Iceni. British Q, the native version of Gallo-Belgic F, spread from Sussex to Gloucestershire, and gave rise both to the coinage of the Dobunni (British R) and also to the inscribed coins of Commius and his sons.

The Celtic coinage of Britain is thus overwhelmingly Gallo-Belgic in origin: Armorican coinage is only found in a thin casual scatter round the coasts, suggesting trade, and had no direct influence even in Dorset; but familiarity with its later base silver issues may have predisposed the Durotriges to convert the British gold types A, B, and O into their own silver staters and quarter-staters.

Finally the Gallic prototypes of the 'Tin' or 'Speculum' coinage are now known to have been still circulating on the Continent down to Claudian times, and the initial date of these coins seems to be much lower than was thought in 1936; it is perhaps to be placed in the middle of the 1st century B.C.

The final session on Sunday afternoon, entitled *Problems of Iron Age Pottery* was introduced by Mr J. W. Brailsford. When pottery is a domestic product it is representative of a whole people, unless as in East Yorkshire there has been a predominantly male immigration. Industrially-produced wares, on the other hand, can be evidence for trade. The introduction of the wheel indicates the arrival of the specialist, and the use of a wheel or turntable was more widespread in Iron Age Britain than is commonly recognized. But even with home-made wares we need mineralogical analysis to check our assumptions. In presentation, a pottery-report needs to be both comprehensive and analytical; only analytical treatment can securely date a layer which is unstratified or contains much 'rubbish-survival'. (The point was illustrated from Hod Hill.) Mr Brailsford alluded to one or two long-standing problems, the need for a closer dating of the A migrations and for defining the transition between the Late Bronze Age and the Iron Age, as also the differentiation between A1 and A2. With regard to Wessex, he pointed to the long survival of native forms in rural districts after the Roman conquest. He agreed that the B phase at Maiden Castle had to be placed substantially earlier than originally proposed, but was conservative on the implications of the Le Câtillon hoard, preserving that the Durotrigian Silver coinage was initiated not in the C, but in the B phase of Dorset.

After this paper there was a lively discussion. Professor S. Piggott pointed out that since Iron Age Society was socially stratified, distribution maps of domestic things, e.g. pottery, did not necessarily correspond with those of fine metal-work or coins. Only in cemeteries would the three come together, and these were still undiscovered. Mr Jope pointed out the contrast between rectangular house plans on the Continent and British round or oval ones:

did this suggest that small numbers were involved in the migrations? He made a plea for greater emphasis on technological rather than decorative aspects of pottery: pots were three-dimensional. An 'S'-shaped pot was an impossibility!

The discussion was summed up by *Professor Hawkes*. He recalled the discovery of Greek pots in Britain, Italian Hallstatt fibulae, and Greek coins: one day we might get an association. What was needed to ensure this was *complete* excavation. Staple Howe showed the truth of this. He pointed to a gap between the early metal-work and the later Mirror style, a gap too great to be accounted for by just a change of style: we needed to know more about the interactions of South-West and North-East, and to find earlier phases behind the Arras culture as at present known. As for pottery, it was important to remember the curved profiles which go right back to Hallstatt B and not to suppose that a curving pot was always a 'degenerate situla'. Bead-rims and necked jars were integral to both Belgic areas but the proportions differed in each. It was true that some things had a long survival; but the date of introduction was usually of prime importance and should be established by reference to continental chronology without any yielding to the temptation to pull it down, however long the survival.

And this was really the keynote of the Conference. After a visit to the special exhibition of Iron Age Pottery at the British Museum, it broke up feeling that by its labours much dead wood had been cleared away, and that short chronologies and low initial datings had been put to flight.

Book Chronicle—*continued from p. 169*

THE GREAT BELZONI. By STANLEY MAYES. pp. 344, 8 text figures, 24 plates. London, Putnam, 1959, 42s. The author, whose amusing account of Dallam's famous journey in 1599–1600 in the *Hector* from London to Constantinople to set up in the Seraglio the organ he had built for the Sultan was published in 1956 under the title of *An Organ for the Sultan* now turns his attention to Giovanni Belzoni. For long forgotten, Belzoni had two biographies published about him in 1957—Colin Clair's *Strong Man Egyptologist* and Willson Disher's *Pharaoh's Fool*. Mr Mayes does this great eccentric justice.

AGHIOS KOSMAS: An Early Bronze Age Settlement and Cemetery in Attica. By GEORGE E. MYLONAS. pp. 191 and 144 pages of plates and figures. Princeton, The University Press (London, Oxford University Press), 1959. £8.

THE STUDY OF GREEK INSCRIPTIONS. By A. G. WOODHEAD. pp. 138 including 3 figures, 4 plates. Cambridge, the University Press, 1959. 22s. 6d.

SAMOTHRACE: THE ANCIENT LITERARY SOURCES. Edited and translated by Naphtali Lewis. pp. 148 and 1 plate. London, Routledge and Kegan Paul, 1959. 50s. The first volume of the account of the Excavations conducted by the Institute of Fine Arts, New York University, under the editorship of Karl Lehmann, and being Bollingen Series LX.

SOUNDINGS AT TELL FAKHARIYAH. By C. W. McEWAN, LINDA S. BRAIDWOOD, HENRI FRANKFORT and others. pp. 103 and 87 plates. Chicago, The University of Chicago Press, 1958. £13 2s. 6d. Volume 79 of the Oriental Institute Publications.

MALTA. By J. D. EVANS. pp. 196, 35 text figures and 48 plates. London, Thames and Hudson, 1959, 30s. Volume XI in the series Ancient Peoples and Places.

[continued on p. 194.]

The Dead Sea Scrolls

by D. WINTON THOMAS

The Regius Professor of Hebrew in the University of Cambridge here considers the Dead Sea Scrolls in the light of three recently published books about them. These are The Ancient Library of Qumran and Modern Biblical Studies, by F. M. Cross Jr. (London, Duckworth), 1958. pp. 196, 19 plates. 21s. The Excavations at Qumran by J. Van der Ploeg (London, Longmans), 1958. pp. 233, 15 plates. 16s. 6d. and The Riddle of the Scrolls by H. E. Del Medico (London, Burke), 1958. pp. 432, 6 plates. 25s.

IN 1947 some Bedouin discovered in a cave in the vicinity of Qumran, about seven and a half miles south of modern Jericho, the scrolls which have since become world famous. The story of their discovery has been told and retold many times, with notable discrepancies. It may be that we shall never know the true facts of their discovery in their entirety. The scrolls in question consist of two biblical scrolls, one a complete text of Isaiah (Isaiah A), the other an incomplete text of the same book (Isaiah B); a commentary on Habakkuk, chapters i and ii, the commentator regarding the prophecy as an allegorical disguise of contemporary events which he interprets accordingly; a scroll known as the Manual of Discipline, or the Sectarian Document, which contains the rules by which a community, to which the scrolls are thought to have belonged, ordered its ascetic life—we hear of initiation rites, oaths of allegiance, organization into groups, the communal meal at which the priest blessed the bread and wine, and of the importance attached to cleanliness and purity; a scroll known as the War of the Sons of Light against the Sons of Darkness, the former being the sons of Levi, Judah and Benjamin, and the latter the age-old enemies of the Jews, among them Edom, Moab, Ammon and Philistia (whether the scroll depicts actual warfare, or the performance of a ritual of holy war, or whether it is of an apocalyptic character, is uncertain); a scroll known as the Hymns of Thanksgiving, which are clearly patterned on Old Testament psalms, though inferior to them in individuality and originality of thought; and a scroll written, not in Hebrew like the others, but in Aramaic, which is a commentary on Genesis, and which is likely to prove of great importance for the study of the Aramaic language of Palestine at a little known period.

The discovery of these scrolls in the cave, now known as Cave I, led to the exploration of further caves in the neighbourhood, and now eleven caves in all have yielded up manuscripts. Every book of the Hebrew Old Testament except the book of Esther is represented. Only Caves I and XI have produced relatively intact manuscripts. The largest single deposit of manuscripts, which may turn out to be the most important of all, was found in Cave IV in 1952. From this cave tens of thousands of fragments, representing more than 380 manuscripts, have been recovered. The scrolls from Cave I, together with the seventy fragmentary manuscripts—biblical, apocryphal, liturgical—discovered in it, have been published. The publication of the documents from Caves II, III, and V-X is expected soon. Some fragments from Cave IV have had preliminary publication, but their full publication cannot be expected for some years. Detailed descriptions of the scrolls from Cave XI still await publication. In the meantime the information given by Cross about them and about the great collection from Cave IV is most welcome. Further discoveries of

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written materials have been made at Murabba'at, about twelve miles south west of Qumran, and at Khirbet Mird (ancient Hyrcania), situated on a peak inland from Qumran. It is generally agreed, however, that the manuscripts discovered at these two sites have nothing to do with the Qumran documents.

Late in 1951, G. Lankester Harding and Père Roland de Vaux began excavations at Khirbet Qumran, the ancient ruins to the south of Cave I, and continued working there in subsequent years. According to the archaeological evidence, the site, which had lain desolate since about 600 B.C., was occupied from the middle or end of the second century B.C. until A.D. 68. The main features of the ruined building which has been unearthed include a strong tower, a kitchen, a room which was used as a *scriptorium*, a long hall, a store room, a laundry, a potter's workshop, a bath, mills and ovens. And hard by was the main cemetery, containing over a thousand tombs. This building, writes van der Ploeg, 'clearly belonged to a community and was destined for common use', and he believes that it formed the headquarters of a sect, or, as he prefers, a brotherhood. And Cross agrees with him. When we go on to enquire what sect or brotherhood occupied the building, the reply of the two writers is the same—the Essenes, of whom the elder Pliny says that they lived somewhere below Jericho, above 'Ain Geddi, and who formed one of the major religious parties within Judaism, a third party with the Pharisees and Sadducees, in late pre-Christian and early Christian times. It is but fair to state that van der Ploeg is less confident of the identification of the sect with the Essenes than is Cross. The scrolls, it is thought, formed part of an Essene library, the non-biblical works being actually Essene in origin, and mostly written in the room which has been taken to be the *scriptorium* of the sect. Most of the biblical scrolls are said to date to the first century B.C. and the first Christian century—the specifically sectarian scrolls are much more restricted in date, the earliest belonging to the second century B.C.—and they were deposited for safety in the caves not later than A.D. 68, when the Qumran community came to an end at the hands of Vespasian's troops. These views of the writers conform to a pattern of interpretation of the evidence which is steadily making headway as the most probable one. Inherent in the pattern is the belief that the ruins of Qumran, the caves and the scrolls are all interconnected.

Not all scholars, however, regard this supposed interconnection as proved. Nor are they convinced that it is the Essenes who come in for consideration as the sect in question. There are indeed many features in the scrolls which resemble what is known about the Essenes from ancient sources. Yet there are also noteworthy differences, both in belief and in organization. In the present state of knowledge, the theory that the Qumran ruins were at one time occupied by Essenes, and that the scrolls, or at least some of them, are Essene in origin, and that it was Essenes who hid them in the caves must remain a theory which as yet lacks proof.

Del Medico for his part strongly repudiates the pattern of interconnection. For him it is not a question of a building used by a sect and a nearby cemetery. For him it is rather a question of a cemetery with a nearby building which was part of the installation of a necropolis and used for funerary purposes. The two tables of masonry with shallow hollows, which some scholars connect with the *scriptorium*, 'belong to a well known type of *mensa* used in funerary offerings', and the great table in stone and stucco, thought by many to be a writing table, 'must have belonged to a *triclinium*' used in connection with funerary *agapes*. The bones of animals—sheep, goats, cows, calves and lambs—which have been found carefully buried, and which for Cross raise the interesting question of the possibility of a sacrificial cult at Qumran, are for Del Medico further evidence of funerary *agapes*—'the annual visits to the tombs at Qumran must at times have been accompanied by some meal in the vicinity'. Van der Ploeg is content to see in the bones an as yet unsolved enigma.

THE DEAD SEA SCROLLS

The theory of an Essene community at Qumran is equally strongly rejected by Del Medico. But he goes much further than merely to deny the existence of such a community. He denies that the Essenes ever existed. The evidence about them in Philo, Pliny, Dio Chrysostom and Josephus is for one reason or another suspect. What then of the alleged Essene library? Del Medico replies that the scrolls never formed a library. The caves were *genizas*, that is, depositories in which manuscripts of sacred books, which were regarded as unsuitable for use by reason of wear or damage, were carefully hidden away. And he finds reasons why each separate scroll was thus withdrawn from use—it bears traces of fire, or it was deliberately mutilated, or it had suffered through damp. As to date, Isaiah A could have been written in the second or first century B.C., and was hidden in the cave towards the end of the first or the beginning of the second century A.D. Isaiah B could have been written at any time between the end of the first and the beginning of the third century A.D. Most of the non-biblical manuscripts date in the first centuries of the Christian era, and 'the passages with a Christian outlook which have been detected in a number of writings are not pre-Christian, but really Christian', and this is very often the reason why the documents were relegated to a *geniza*. The Hymns, which range in date from the beginning of the Christian era or before to the middle of the second century, are thought to contain many passages which come from Christian sources. If it be objected that, if the documents emanate from Christian sources, it is surprising that there is no mention in them of the name of Jesus or of any of the Apostles, Del Medico is ready with his answer—the same is true of some of the apocryphal writings whose Christian origin is not in dispute. He finds no mention of the name of Jesus, but he does find reference to him in a passage from the Hymns which he regards as Gentile-Christian in origin, dating from the end of the first century A.D. An anti-Pauline attitude is likewise discovered in some hymns emanating from Jewish-Christian circles.

It is always interesting to discover the attitude of writers on the scrolls towards the much debated identifications of peoples and persons mentioned in the documents. Thus, for example, the Kittim, who appear in the rôle of a hostile power, are, according to van der Ploeg and Cross, to be identified with the Romans, and not, as some think, with the Seleucids of Syria. Del Medico, however, denies that the Kittim were a people at all. The Hebrew word, he believes, is not a proper name, but a common noun, and should be read not *kittim*, but *katya'im* 'the legions' (of Rome). The foremost figure in the Damascus Document, which is commonly thought to be connected in some way with the scrolls, and in the Habakkuk Commentary, is the Teacher of Righteousness, who, according to van der Ploeg, lived in the first quarter of the first century B.C. He was a priest whose followers were bound together by a Covenant. Another central figure mentioned in the Habakkuk Commentary is the Wicked Priest, who was in conflict with the Teacher. The list of proposed identifications of the Teacher is already a long one, ranging from Onias III (died B.C. 171) to Jesus himself. Where so many possibilities occur, none easily carries conviction. And there is moreover the possibility that the phrase Teacher of Righteousness (or Righteous Teacher, as Cross prefers) may be not a description of a particular individual, but rather a title which was conferred upon successive leaders, a possibility which Del Medico allows but which Cross rejects. It may be regarded as a mark of prudence when van der Ploeg and Cross refrain from guesses as to the Teacher's identity. Many attempts too have been made to identify the Wicked Priest. A number of persons who lived in the second and first centuries B.C. have been suggested, Paul too, even the Seljuk governor of mediaeval Palestine! Van der Ploeg's vote goes to Alexander Jannaeus (B.C. 103–76). Cross favours Simon the Hasmonaeon (B.C. 142–132).

Once more Del Medico goes his own way. The identity of the Teacher and of the Wicked

Priest is, he holds, to be discovered against the background of the struggles between the Jews in the years just before the Roman war of 66-70 A.D. The Teacher is Menahem who was killed in 66 A.D., and the Wicked Priest is the high-priest Ananias. The Damascus Document is in his view mediaeval and of Qaraite origin, and is in no way connected with the Qumran manuscripts. The Teacher in the Damascus Document is, we are told, Nehemiah. Josephus's statement that Menahem was a son of Judas of Galilee, founder of the Zealot movement, is regarded by Del Medico as incorrect. Menahem, according to him, belonged to a priestly family, to whose support nevertheless many Zealots flocked. Del Medico's views on this matter have a rather special interest just now when the identification of the Teacher with Menahem, which, he claims, was first proposed by him, and the Zealot background of the scrolls, is being advocated in this country by Dr C. Roth and Professor G. R. Driver. From Zealot circles, Del Medico thinks, come the greater part of the Manual of Discipline and many of the Hymns. As a comment it may be remarked that it does not seem easy to fit in events which took place in A.D. 66 with the current interpretation of the archaeological evidence, according to which A.D. 68, only two years later, is the latest date at which the scrolls could have been deposited in the cave.

Van der Ploeg writes interestingly on the beliefs of the Qumran sect. In their dualistic conception of the universe and in their ideas on immortality he sees Persian influence. Other views they held, however, such as those on predestination and sinfulness are, he concludes, quite in line with Old Testament thought. On the subject of Qumran and Christianity he writes judiciously. He refuses to be disturbed by the resemblances between the Teacher of Righteousness and Jesus which A. Dupont-Sommer claims to find, or by the theory of J. M. Allegro that the texts from Qumran show that the Teacher was crucified by Alexander Jannaeus, that his body was taken down from the cross and buried, and that his disciples expected his resurrection and second coming, Jesus thus corresponding in essential features to a Qumran prototype. 'Allegro's assertions', he writes, 'have been weighed in the balance and found not merely too light but without any weight at all'. Cross too argues that, in the light of a recently published text, albeit badly preserved, the attempt of the Wicked Priest to take the Teacher's life was unsuccessful. After discussing the resemblances and differences between the sect of Qumran and the Christian Church, van der Ploeg's final verdict is that 'it has certainly become clearer than before that Christianity did not arise in a vacuum, but that it took over its form of organization and part of its moral teaching from organizations and ethics already in existence. The task of recording agreements also brings to light the great and profound differences. Anyone who wishes to convince himself fully should read the texts from Qumran, and after that the Gospels and the rest of the New Testament. His verdict will not be doubtful. Qumran and the New Testament speak each their own language'.

Cross too considers the many points of contact between the Qumran documents and the New Testament. Especially in the Gospel of John does he find such contacts, linguistic and conceptual, in evidence. Eschatological motifs common to both sets of documents are discussed, more particularly Messianism, as well as features in the scrolls which bear on the origins of the organizational structure of the early Church, such as a ruling assembly, an episcopal overseer, a council of twelve, baptisms and common meals. We may hear his verdict also—'the New Testament faith was not a new faith, but the fulfilment of an old faith. The Church is precisely Israel in its self-understanding. Jesus did not propose to present a new system of universal truths. He came to fulfil the past work of God, to confirm the faith of the fathers, to open the meaning of the Law and Prophets. The New Testament does not set aside or supplant the Old Testament. It affirms it and, from its point of view, completes it. Lines of continuity between Moses and Jesus, Isaiah and Jesus, the

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Righteous Teacher and Jesus, John the Baptist and Jesus should occasion no surprise. On the contrary, a biblical faith is not a system of ideas, but a history of God's acts of redemption'.

As was indicated earlier, only comparatively little of these new documents has so far been published. It must be emphasized therefore that research into the many and wide ranging problems to which they give rise is still in a preliminary stage, and that much is still uncertain, including the all important matter of dating. Conclusions must accordingly be considered as tentative only. Yet on one point a certain confidence may be permitted. In 1949 the present writer stated that on one matter scholars are not likely to disagree, namely, that the biblical manuscripts from the Dead Sea antedate by centuries the oldest manuscripts of the Hebrew Old Testament hitherto known. This seemed to him to be the essential, solid fact which at that time emerged, and which gave such great significance to the discovery of the manuscripts. In all the present uncertainty this remains the one indisputable fact about the scrolls which needs to be stressed. Before the discovery of the scrolls, the oldest Hebrew manuscripts of the Old Testament belonged to the ninth and tenth centuries A.D. It is clear then that on almost any dating of the scrolls which merits serious consideration the biblical manuscripts from Qumran offer a witness to the Hebrew text of the Old Testament which is centuries older. In the case of Isaiah A, when all due allowance has been made for the divergencies between the text which it preserves and the Massoretic Hebrew text, the two texts, orthography apart, agree remarkably, but not uniformly. The same is true also of the text of Isaiah B and of the citations of the biblical text in the Habakkuk Commentary.

From Cave IV comes something different, a Hebrew text of Samuel which is markedly divergent from the Massoretic Hebrew text, and which approximates closely to the Greek text of the Septuagint. Other historical books too, so far as they are preserved, represent the Greek tradition. The divergent text of the Septuagint appears then to be due not so much to the idiosyncrasies of the translator as to the type of Hebrew text which lay before him. Cross draws the important conclusion that, if the translators of the historical books reproduced faithfully the Hebrew text from which they worked, then the primary importance of the Septuagint for Old Testament criticism is well on its way to rehabilitation. Already he is able to say that among the studies of the text of Samuel which needs least revision in the light of the new material is Wellhausen's commentary published in 1871. Intricate problems arise both from the agreement of the scrolls texts with the Massoretic Hebrew text and from their divergence from it. It is evident that, with these new documents, a new era in the history of the textual criticism of the Old Testament has begun.

On the side of the higher criticism, no great contribution has yet been made by the scrolls, but one or two points of interest already emerge. For example, critics have long held that on literary grounds the third chapter of the book of Habakkuk was originally an independent document. The Habakkuk Commentary, with its two chapters only, may be said to lend some, if not decisive, support to this view. Again, it has sometimes been held that Isaiah xxiv-xxvii and parts of lv-lxvi were not composed until the second century B.C. If Isaiah A belongs to this period, these chapters were already composed at this time, and, moreover, had their present position in the book. The composition of any part of the book of Isaiah so late as the second century B.C. would thus appear to be out of the question. Cross believes that the material now available permits the conclusion that probably no canonical book of the Old Testament postdates the Maccabean age. The study of the Psalms in particular looks like being greatly affected by the appearance, as he believes, in Essene circles, of collections of hymns of this age.

Van der Ploeg's book is written for the layman. Throughout he properly recognizes the

complexity of the problems, and he brings to his study of them a sober judgment. Occasionally he indulges in a flight of fancy, as, for example, when he pictures the Roman soldiers tearing up the sacred books in the caves. But in general he is a reliable guide. So too is Cross. His lectures were written with public presentation in view, but the addition of extensive footnotes has transformed them into a work which the specialist will wish to consult. That his book is highly informative is not surprising, since he is one of two American members of the international staff which is editing the newer finds.

A summary judgment on Del Medico's book is not easy. It reveals a strikingly acute mind, and the opinions expressed by the author are buttressed by a wealth of learning, some of it curious. Parts two and three of his book contain his translations of the non-biblical texts from Cave I and of the Damascus Document, together with his views as to the circles from which they emanate and the correct interpretations of them. It may often be felt that his interpretation is far-fetched, indeed unnecessary. As an illustration we may refer to his interpretation of Fragment X of the Hymns. In this prayer he sees the work of a prisoner in the hands of the Romans who is waiting in his cell to be thrown to the beasts in the arena. A comparison with the language of the biblical psalms would seem, however, to allow a less colourful interpretation. So far Del Medico's views have not won general acceptance, though the late E. L. Sukenik, who played a prominent part in the early days of the discovery of the scrolls, thought, as he does, that the caves were *genizas*, and Millar Burrows, writing in 1958, regards the *geniza* theory as not entirely dead. Nor is Del Medico alone in detecting Christian passages in the documents. It was said earlier that a pattern of interpretation, by which the ruins of Qumran, the caves and the scrolls are interconnected is now widely adopted. There is indeed a real danger that this pattern—and we may include in it the identification of the sect with the Essenes and the belief that the scrolls, or some of them, are Essene in origin—may become set prematurely, and that the legitimacy, even necessity, of treating the ruins and the scrolls as separate and distinct fields of research may be denied, or at least lost sight of. It is a merit of Del Medico's book that it challenges this pattern and thereby does something to keep the issues more widely open. His book is not, he informs us, intended for the specialist. But only the specialist will appreciate much that is in it. Improbabilities in it indeed there are, but there are too arguments which deserve serious consideration.

Book Chronicle—continued from p. 188

- DAS ALTE AMERIKA: By HERMANN TRIMBORN. pp. 151, 6 text figures, 5 maps, 116 plates, including 4 in colour. Stuttgart, Gustav Kilpper Verlag, 1959. DM 24.50. The tenth volume in the series *Grosse Kulturen der Fruhzeit*, of which the ninth volume, Moreau's *Die Welt der Kelten* is reviewed in this number (p. 227).
- EARLY INDIA AND PAKISTAN. By SIR MORTIMER WHEELER. pp. 190, 32 text figures and 48 plates. London, Thames and Hudson, 1959. 25s. Volume XII in the series *Ancient Peoples and Places*.
- DIGGING BEYOND THE TIGRIS. By LINDA BRAIDWOOD. pp. 297 and 32 plates. London and New York, Abelard-Schuman, 1959. 25s. Mrs Braidwood's account of the excavations at Jarmo and of life in modern Kurdish villages.
- FROM APE TO ANGEL. By H. R. HAYS. pp. 461 and 32 plates. London, Methuen, 1959. 36s. Described as 'an informal history of social anthropology' it takes one easily from the travels of Bougainville and Cook to the theories of Talcott Parsons and Margaret Mead.

[continued on p. 204.]

Archaeology and the Ordnance Survey

by C. W. PHILLIPS

In this article, the Archaeology Officer of the Ordnance Survey discusses the origins and history of the Ordnance Survey's concern with archaeology, and outlines the present organization and plans of its archaeological activities.

THE Ordnance Survey of Great Britain is now in its 167th year. Founded in 1791, it has provided a map coverage of this country which is unexcelled in its completeness and in the range of its scales. All the most important towns are now being mapped on a 1/1250 (50-in.) scale in a new survey, over 60 per cent of which have now been completed. Only a few mountainous and uninhabited regions are excluded from the 1/2500 (25-in.) scale which otherwise covers the whole country. Consequential from this scale is a further series of maps at scales of 1/10,560 (6-in.), 1/25,000 (2½-in.), 1/63,360 (1-in.), 1/126,720 (½-in.), and 1/253,440 (¼-in.). Except for the north-west of Scotland the 1/25,000 (2½-in.) scale map covers the whole of the country, but the 1/126,720 (½-in.) scale has only recently been started and will take some years to complete.

An unusual feature of the whole of these map series when compared with other national surveys is the attention it pays to the mapping of antiquities. This is not confined to the delineation of those ancient features which have size and bulk which make it impossible to omit them from any map. A big range of antiquities is shown. The current list shows 107 different types ranging in date from the earliest times down to the 18th century. Some, like burial mounds, are small; others, like major hill-forts or Roman town sites, cover many acres, while others of linear type like Hadrian's Wall or Offa's Dyke approach or exceed 100 miles in length. Apart from this kind of antiquity which can still be recognized on the ground, there are many places indicated where important finds of portable objects have been made, and the sites of battles and other historic events are shown.

The history of the earliest days of the Ordnance Survey is obscure and the more so because of the loss of many records by enemy bombing at Southampton in 1940. It is therefore impossible to point to any early policy decision to show antiquities on the maps, and the reason for this practice must be found in conditions which prevailed at the end of the 18th century. Foremost, perhaps, was a widely diffused belief that some interest in antiquities might be presumed among the educated classes. This presumption was well founded, and there was a strong tradition of the active study of British field archaeology on topographic lines which ran back to the 16th century. For this reason the various private cartographers who had prepared a large series of county maps during the 18th century had, in greater or lesser degree, paid attention to the more important antiquities of the countryside. Before 1940 the Ordnance Survey Library contained a large collection of these county maps which had obviously been acquired for use at the time of the first surveys, and it is impossible to discount their influence on the practice of the first Ordnance Surveyors.

However this may be, we may suspect the most direct influence came from Major-General William Roy. Although he died one year before the founding of the Ordnance

Survey, it was his advocacy of a national survey coupled with the war threat from Revolutionary France which brought it into being. Parallel with his career as a great geodesist and topographer had been his intense interest in the field archaeology of the Romans in Scotland which had begun when he was a civil assistant employed on the first survey of Scotland following the rising of the '45. In 1755 he had been concerned in the first mapping of the course of the Antonine Wall, and this interest remained with him for the rest of his life. He was also a Fellow of the Royal Society which in those days was a less highly specialized body than now and normally contained many of the leading contemporary archaeologists in its fellowship. We cannot be sure, but since the Survey relied much on the advice and support of the Royal Society in its early days, this may be an important means by which his ideas of the archaeological duties of a National Survey were conveyed to the new organization.

The fact remains that the first map produced by the Ordnance Survey paid no special attention to archaeology. This was the 1-in. map of Kent, parts of Essex, and the Thames Estuary which was published in 1801. It shows the Roman fort at Richborough adequately, but passes over those at Lympne and Reculver. The Iron Age hill-fort of Oldbury near Ightham is mapped with some accuracy but is described as a Roman camp, while the other big fort at Bigbury, west of Canterbury, is only shown by implication through the marking of Bigbury Wood. The only road named as Roman is a comparatively unused stretch of Watling Street and the greater part of its course is not so described. Most of the extant medieval castles are shown, but there are some exceptions. Thus antiquities are only noted when they are large features and not for their own sake. Clearly, no settled policy on this point had been evolved in the Survey's first decade and the critical nature of the times may well have been responsible for this.

After 1801 rapid progress was made with the 1-in. series in Southern England and the South Midlands, and now antiquities began to receive more attention. Nothing is known in detail of the way in which they were identified and checked, but a surviving proof of the 1817 map of Wiltshire bears corrections in the handwriting of Sir Richard Colt Hoare, the distinguished author of *Ancient Wiltshire*, which suggests that this work was submitted for comment to the best authorities available.

The intellectual climate of the first third of the 19th century must also have been propitious to the survey of antiquities during these formative years. This was the period of the Romantic Revival in which Ancient Britons, castles shattered by time, ruined abbeys, moated granges, and the like came into their own, and the prevailing fashion can have done nothing to discourage any existing tendency to map them.

The beginning of the 6-in. survey of Ireland in 1824 brought the Survey squarely against the problem of dealing with antiquities in a big way for the first time. This new departure arose from the Government's concern with land problems in Ireland. Careful plans had to be made to provide for all the new factors introduced by the radical change of scale. The Director General, Sir Thomas Colby, drew up an instruction called 'Heads of Enquiry' for the guidance of the officers who would do the work in the field.

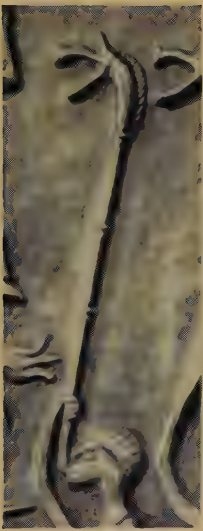
This was a comprehensive document, and in it Colby showed himself fully aware of the problems which would be posed by antiquities in a country where they occur in abundance. He had already borne a large share of responsibility for Ordnance Survey work before he succeeded General Mudge in 1820. A busy and distinguished official career had compelled General Mudge to delegate many of his duties to Colby, and it is certain that the latter must already have had considerable experience with the showing of antiquities in the production of the 1-in. scale map in England.

Colby suggested that antiquities should be examined under the headings of ecclesiastical

PLATE XVII



Cernunnus on the GUNDESTRUP bowl.



(a)



(b)



(c)



(d)



(e)



(f)



(g)

Details from the GUNDESTRUP bowl: (a) *Carnyx*; (b) and (c) swords, *b* showing the upper part, and *c*, presumably, the lower part of the hilt; (d) and (e) shield; (f) and (g) warriors; note *g* shows shoulder rings.

See pp. 161-9]

[Photos: Larsen

PLATE XIX



(a)



(b)



(c)



(d)

GUNDESTRUP: (a) Upper part of grave-stone for C. Romanus, a Celto-Roman auxiliary soldier, in Mainz; (b) Reims altar: Cernunnus sitting in the centre; (c) mounted warrior on the Gundestrup bowl; (d) warrior sitting with crossed legs, from Entremont.

See pp. 161-9]



(a)



(b)



(c)



(d)



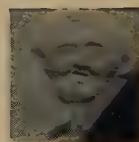
(e)



(f)



(g)



(h)



(j)



(k)



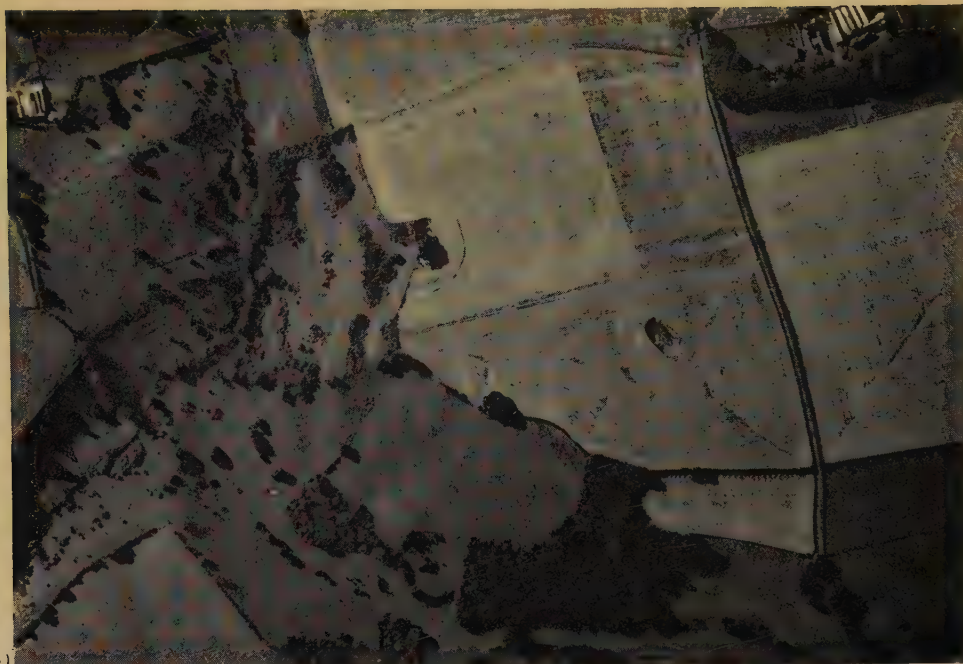
(l)



(m)

(a), (b), (d), (e) and (f) details from the GUNDESTRUP bowl (Photo: Larsen), (c) oxhead on knife hilt from Heppenheim (Photo: Mus. Worms), (g) detail of sculpture from Provence (Musée d'Avignon); (h) and (j) details on *terra sigillata* from Vertault (photographs of casts); (k), (l) and (m) two ibexes eating from a palm; k, from Tell Halaf; l, from Bologna (Photo: Mus. Bologna), and m, from Port (Photo: Mus. Berne).

PLATE XXI

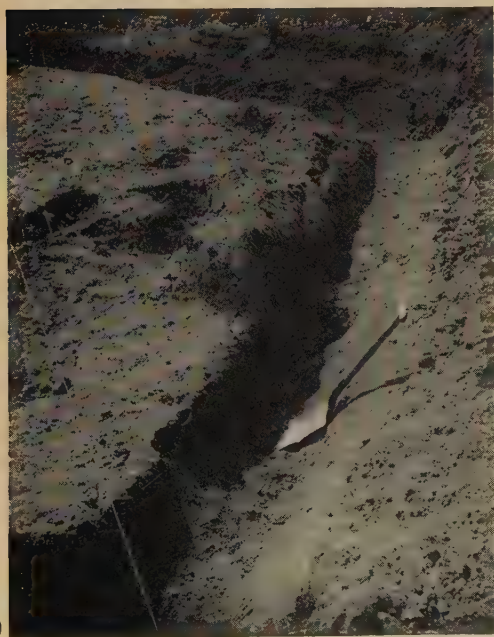


(a)

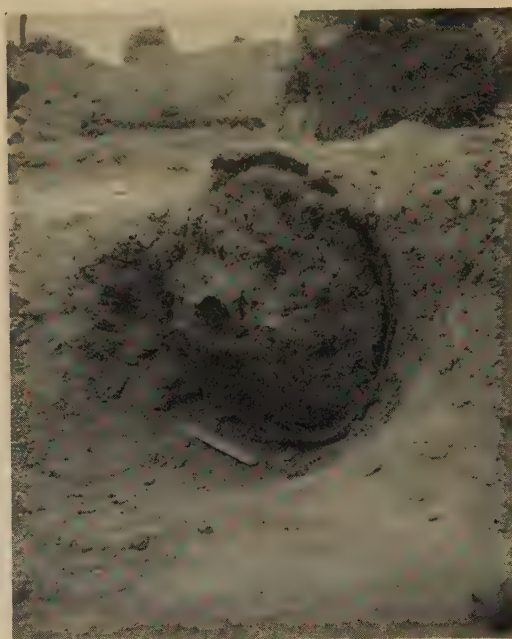
(a) GRIMTHORPE: Air photograph of the hill-fort.

See p. 209]

[Crown Copyright reserved



(b)



(c)

PEXTON MOOR: (b) Angle of the ditch surrounding the chariot burial; (c) Iron tyre and nave-hoop (1935).

See p. 214]

PLATE XXII



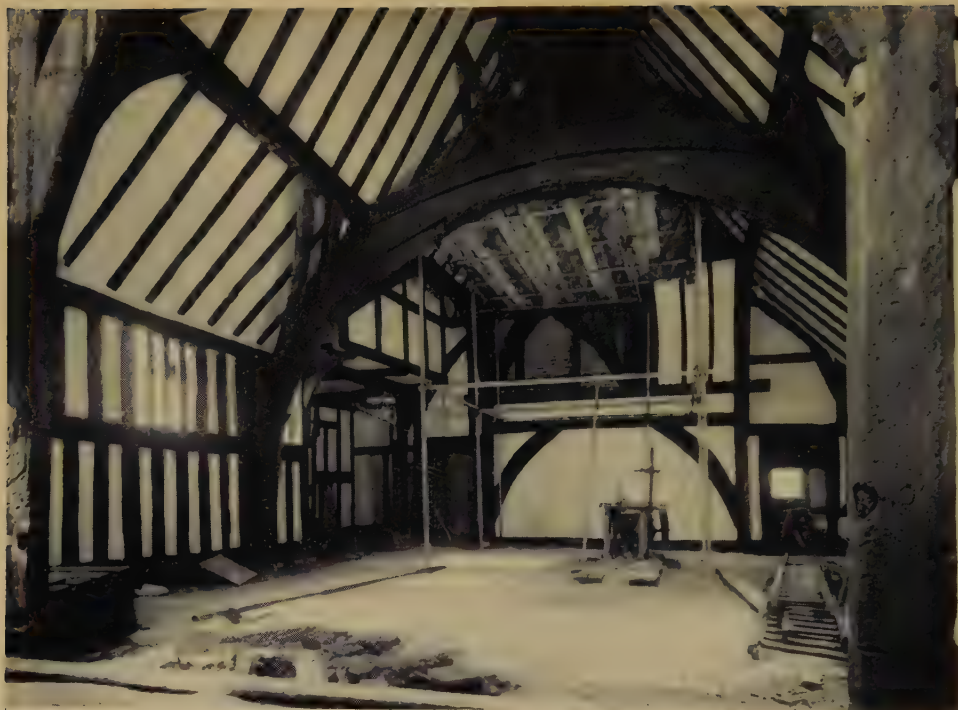
WEST BROMWICH: Part of the Old Hall before restoration (chapel from the north-east).

See p. 216]



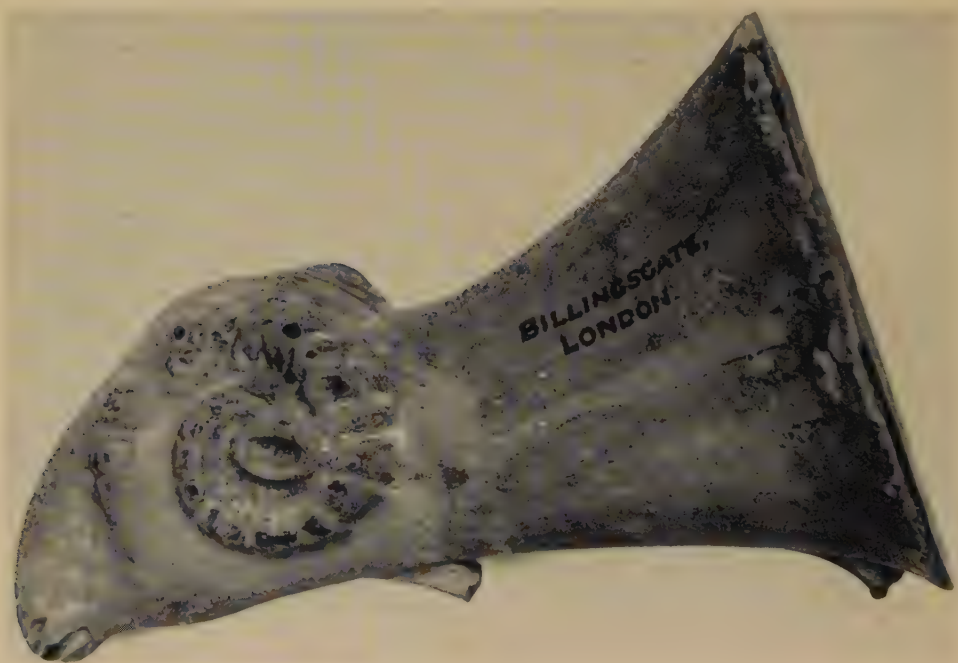
WEST BROMWICH: Restoration work to the Old Hall photographed in June 1959.

See p. 217



(a) WEST BROMWICH: The Great Hall, looking towards the screens passage.

[See p. 217]



(b) A so-called GREEK RHYTON from London.

[See p. 218]

ARCHAEOLOGY AND THE ORDNANCE SURVEY

buildings, military buildings, remains of pagan or unknown origin, and miscellaneous. Here are his words under heading three.

'Pagan, etc. This section embraces that interesting class of antiquities, of which though the origin may, in most cases, be conjectured with tolerable accuracy, and of many the date assigned to particular eras or ages of history, it must be admitted that they belong to a state of society widely different from the present, and are probably all antecedent to the great change introduced by Christianity. Such are cromlechs, forts, raths, duns, cahirs, cashels, cairns, coves, caves. : Inquire whether they have ever been opened or excavated? any chambers found in them? containing bones, ashes, vessels, weapons, coins, etc., or if any have ever been found in the neighbourhood, or in the bogs; note always the position in which they have lain, if possible furnish sketches, and state in whose possession they are.'

This was a remarkable utterance for its time and, as will be seen below, it was to exercise a decisive influence on archaeology as a subject for the attention of the Ordnance Survey throughout the British Isles.

So the Irish survey got off to a good start, and under the local direction of Lieutenant—later Sir Thomas—Barcom it soon became necessary to get assistance with Irish place names. The Irish scholar John O'Donovan was added to the staff to establish their correct form. During the course of his work he was obliged to deal with a number of problems which drew him insensibly into the field of archaeology. Before his appointment ended with the completion of the survey in Ireland he had in fact become an archaeological adviser to the Survey as well as its local place name expert. Besides carrying out his own researches he had also drawn on the knowledge of contemporaries like Sir William Wilde, and the excellent showing of antiquities on the Irish maps was the result of a large collation of information from many sources. The remainder of his career was spent as Professor of the Celtic Languages at the Queen's University, Belfast.

From Ireland the Survey turned to the greater task of a large scale survey of Great Britain which began in 1853 and was to occupy most of the rest of the century. After a period of uncertainty the decision to proceed with the 25-in. and 6-in. survey was taken in 1863. In the same year the leading archaeological societies memorialized the Government, approving the showing of antiquities on Ordnance Survey maps, and seeking assurance that they would continue to be shown on the new large scale plans. They offered their co-operation in helping the surveyors with such information as they could supply, and the offer was accepted.

Sir Henry James had taken over the direction of the Survey in 1854. He had a considerable personal interest in archaeology and he proceeded to apply the rules which Colby had drawn up for Ireland to the work in Great Britain. Their scope was enlarged by provision for the recording of find spots of portable objects and the sites of other antiquities already destroyed. This was an important step in the direction of a total survey of British archaeological topography, but no attempt seems to have been made to secure any central co-ordination by the appointment of an officer. Apparently the lesson of John O'Donovan's work had not yet been learned.

The progress of archaeology as a science in recent years has been so striking that it is not easy to realize the difficulties which would have attended such an appointment. Central control might have secured the survey of many more antiquities than were in fact placed on the plans which would have been a gain, but in many cases their accurate description would have had to wait till a later time. The advice and help of an archaeological society might also amount to little of practical value in the years following 1863. Field archaeology

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had not yet emerged from the barrow digging craze, and the most that could normally have been expected was that attention would be drawn to some antiquities which would otherwise have been treated as 'natural slopes' by the surveyors. There was the further difficulty that much of the country was covered by no society.

Against this background Sir Henry James went to work. In 1865 he issued an order which referred to

'the necessity of officers making themselves acquainted with the local history of, and (by personal inspections) with the objects of, antiquarian interest in the districts which they are surveying in order that all such objects may be properly represented on the plans, and fully described in the Name Books.'

In practice much depended on the zeal and knowledge of these officers. Some showed great interest, others did not have the same aptitude for the work; the result was that the quality of the depiction of antiquities varied throughout the country. A careful inspection of the large-scale plans produced at this time shows that sometimes remarkably good work was done. It is thus that the work of an officer like Captain Crawford (not O. G. S.) who is known to have been interested in antiquities stands out clearly. The first large scale survey of the Yorkshire Wolds was in his hands and the plans show a remarkably large number of sites, some of them highly complicated like those of deserted villages of the type of Wharram Percy and Cottam. Recent excavations at the former have borne witness to the quality of this pioneer work.

In fairness to our predecessors it must be said that in the compilation of the Name Books the recording activity of the present Archaeology Division was foreshadowed. Where possible, brief extracts from standard publications were incorporated in the details given about the more important antiquities. The loss of most of these Name Books in 1940 was not the least disaster of that November night. Our information about most major antiquities does not depend on them today, but much casual information about lesser sites and finds which had been picked up by the surveyors and recorded in the Name Books found no other form of publication so that it is often impossible to give any authority for some of the entries on the plans.

So the large-scale survey was completed and a very large number of antiquities had been mapped. This was a massive and unique achievement, and nothing which has been said above can alter this. Judged from the standpoint of the mid-20th century it has many defects, but it has not the cardinal one of total absence.

A static position was now reached. The various instructions issued to revisers from 1881 onwards all insist on the value and necessity of consulting local authorities who were to be asked to point out *on the spot* the site of antiquities to be added to the plans. But without central professional control these instructions did not avail very much. If an antiquity had been put on a plan it normally remained there, though its description might be changed at a subsequent revision, but there is little evidence that many of those sites which had been overlooked were added between 1881 and 1920 in any significant numbers. Revision was mainly concerned with what was already on the plans, and not with the addition of more material.

The turn of the century saw the appearance of new influences which were to change this. The work of General Pitt-Rivers which came to a close at this time set up a new and scientific approach to field problems and brought them out of the fog of antiquarianism. These new principles were equally applicable to all periods with which archaeology has to deal, but they were not widely taken up before the end of the First World War. Another pioneer in the more limited field of Romano-British studies was Professor Haverfield, and through him informed opinion became aware of the errors of many attributions on the map, and of

the inability of the Survey to make much improvement as it was then constituted. Discontent was first given public expression by Haverfield in 1908 in a lecture to the Royal Geographic Society on 'The Ordnance Survey maps from the point of view of the antiquities shown on them.'

It was fortunate that a man now became Director-General who took a strong personal interest in this question. This was Sir Charles Arden Close. We have already seen that on a number of critical occasions ere this archaeology had received sympathetic and decisive encouragement from those at the head of the Survey, and now once more there was a fortunate conjunction of the need with the man to supply it. During the First World War Sir Charles had come into contact with O. G. S. Crawford and had sensed the quality of this rising young archaeologist. Thus when in 1920 the British Association asked that more careful attention might be given to the description of antiquities on Survey maps, he knew where to turn to fill the new post of Archaeology Officer which was authorized in that year.

Thus in the fullness of time the weak spot in the organization had been recognized and a remedy supplied. During the next twenty years O. G. S. Crawford was to put Ordnance Survey archaeology on the map both actually and figuratively. His successes as Archaeology Officer are well known, but, until the publication of his autobiography *Said and Done* few outside his immediate circle of friends realized the various difficulties with which he had to contend. In the main these came from three sources, the difficulties which the Ordnance Survey itself had at this time, the troubles which are bound to occur while the sphere of action of a new post is being worked out, and the purely personal difficulties which arose from Crawford's own temperament.

We can deal quickly with the last by saying that Crawford was an intense individualist who had his own ideas how things should be done and said so. Sometimes this made it difficult for him to have an easy working relationship with those who had to control events and procedures in the Survey. It was also unlucky that Crawford took up his post at the end of Sir Charles Close's term as Director-General, so that he had to establish his position in his early days under a régime that was for a while less sympathetic.

But the prime impediment during most of the period 1920-40 was common to all who served in the Survey at this period. The end of the First World War was followed by a period of sharp financial retrenchment which struck all branches of the public service and none more shrewdly than the Ordnance Survey. For fifteen years its capacity for work was reduced to a low ebb until the position was restored by the findings of the Davidson Committee. Since an overhaul of antiquities could only take place at revision stage, Crawford's power to make any large visible improvements in the plans was gravely prejudiced. He thus shared in the common misfortune.

It also took time to establish what the functions of an Archaeology Officer would be in practice. Some time elapsed before Crawford had fully made his point that field work must be carried on actively, for any improvement in the delineation and description of antiquities must be based on direct knowledge of their actual state. There were also other difficulties, but they were all resolved as far as the circumstances of the time permitted.

If the conditions were not ideal for an immediate and widespread improvement in the Survey treatment of antiquities on its maps and plans Crawford was still able to do a great deal of work which has profoundly influenced Survey archaeology. In the more general sphere he was able to make vital contributions to archaeology as a science and, more locally, his field work built up a large reserve of information on which the Survey could draw on in later and better times.

These things became possible through the facilities which were accorded to him as Archaeology Officer. His pioneer work in applying air photography to field work was an

outcome of his experience as an observer in the Royal Flying Corps during the First World War. It has had a revolutionary effect on archaeology in many parts of the world and Crawford made use of it in building up our knowledge of field monuments in Britain to a degree hardly imaginable in 1900. Not less important was the way in which he developed the purely terrestrial methods of another pioneer, Williams-Freeman, whose influence on him had been profound. By this he showed how much can be done to increase our knowledge of the archaeological content and possibilities of an area by careful ground inspection, using the evidence of early charters, maps, and other documents of many kinds. The writer has a vivid recollection of walking round the boundaries of Bessels Leigh near Oxford with him in 1932 to see how far the marks mentioned in a charter of the 9th century A.D. could still be identified on the ground. The eastern range of the boundary ran through coppices and the actual line was along the course of a brook known in Anglo-Saxon times as the 'Osse dic'. One of the points on it mentioned in the charter was a feature described as the 'Stirigan' pool. In effect this means the fish pool, and he will not forget the satisfaction with which, in following down the line of the still extant brook, we found, deep in a mass of undergrowth, the manifest remains of an old fish pond. The fruits of this kind of work will be found in his classic *Archaeology in the Field* (1953), published after his retirement, in which the results of twenty years of work for the Ordnance Survey find their most convincing expression.

Another field in which Crawford had been a pioneer before he joined the Survey was that of the application of the distributional method to the study of ancient cultures. In 1923 he put forward a scheme for the publication by the Survey of a special map of Roman Britain. Considered from the standpoint of 1958 this was a crude production and it is difficult to realize that only thirty-five years ago it could be hailed as a great advance. But so it was, and he was encouraged to produce a second edition which appeared in 1928. This was much improved and was able to hold the field for a quarter of a century till the third edition came out in 1956. All three editions have enjoyed considerable success in their turn.

Once fairly started with Roman Britain, Crawford embarked on a programme of period maps. The first feature was designed to be a series of maps on the $\frac{1}{4}$ -in. scale covering the megalith remains in Britain of the Neolithic and Early Bronze Ages and including all known features of the Neolithic cultures. Three of these maps were produced, Neolithic Wessex (1932), the Trent Basin (1933), and South Wales (1936). A fourth covering North-East England was in the drawing stage when it was destroyed in the holocaust of 1940. Another important map was that of Britain in the Dark Ages of which the south sheet came out in 1935 and the north sheet in 1938. A purely historical map was that of England and Wales in the 17th Century, published in 1937. A map of Monastic Britain in two sheets, north and south, was under preparation in 1940 and was drastically revised and issued in two successive editions in 1950 and 1954-5. There was also a scheme for publishing a series of smaller maps giving details of the ancient field systems of Salisbury Plain. Two only, Old Sarum and Amesbury, had been produced by 1940 and further work is now made unnecessary by studies being pursued elsewhere. Most of the reproduction material relating to period maps published before 1940 perished in the fire of that year and the great progress made in knowledge since then makes it inadvisable to revive them in their old form. Since 1947, period maps have continued to appear, but at a slower rate because of the greatly increased responsibilities of the Archaeology Division in other fields. These maps have rightly gained the esteem of the public and are the most original of Crawford's contributions to Ordnance Survey work.

Crawford was an intense individualist and, while he was duly critical of failures of

organization by others, he was not much concerned to create more than an absolute minimum of it for himself. Thus the inability of the Department to provide him with more than a few staff for reasons already mentioned above did not really trouble him very much, and he would probably have found it irksome to manage a larger staff had it been available. The only important development on this side between 1920 and 1940 was the addition of an Assistant Archaeology Officer, Mr (now Professor) W. F. Grimes, and this came too late to have a large effect before 1940. The immediate legacy which Crawford left behind when his practical connection with the Department ceased in 1940 was a large amount of field information collected by himself and a group of like-minded correspondents whom he had recruited in various parts of the country. This latter arrangement was rather haphazard, but it succeeded in saving a large amount of more or less fugitive information most of which would have been lost without it, and it pointed the way to developments after 1947. Crawford's foresight in saving all this material from imminent disaster in 1940 should be put on record here.

He had also built up a large collection of reproductions of old estate maps and plans which was badly wrecked by the fire of 1940, but the loss was minimized by the fact that copies had been deposited in the British Museum. In gathering these maps he could claim to have done much to stimulate the preservation of such records all over the country. It seems obvious to safeguard them now, but not much was being done before Crawford took a hand.

Shortly before the outbreak of the Second World War the deterioration of the up-to-dateness of the national maps, due to economy measures, ended in the appointment of a Commission under the chairmanship of Lord Davidson to consider the future of the Department. This came too late to affect Crawford's position, though it commented favourably on his work. Its recommendations were designed to give the Survey an adequate staff and to introduce new scales, new methods of revision, and the National Grid. In short it looked forward to a period of revived activity in which the task of revision would be performed with speed and efficiency, but the outbreak of war postponed the carrying out of most of its proposals till 1945 and the following years.

The first post-war work of the Survey in the field was to carry out the recommendation for the survey of all large towns and built-up areas on the new scale of 50 in. to the mile (1/1250), and to begin the establishment of continuous revision in place of the old cyclical process which had broken down in pre-war years. Of course there was much other work on hand, but this new survey of the major towns was pushed forward with vigour and had accomplished more than half its programme by 1957. While it was in progress little attention could be paid to rural revision where most archaeological work is found, and so a respite of a decade was granted in which stock could be taken and preparations made. Unless there was a change in policy about showing antiquities the general revision of the later 20th century would provide the opportunity to remedy the omissions of the earlier surveys.

For all practical purposes archaeology had been in abeyance in the Survey from 1940 to 1947. When it was revived a new situation had come into being such as Crawford had never known. It was now certain that, as soon as immediate commitments had been cleared away, there would be a general revision of the country areas. Here archaeology would come in strongly. Further, it was necessary to deal with this as soon as possible because new developments in the use of land were cutting a swathe through surviving monuments in a way hardly contemplated before 1940. The employment of more powerful agricultural machinery, the ploughing of marginal lands, the extension of Forestry Commission plantations, and the growth of suburbs were taking their annual toll.

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The Archaeology Division was therefore due for reform, and in achieving this the following points had to be observed:—

1. The staff must be adequate both in numbers and quality to deal with the increased volume of work created by the greater activity of the Survey as a whole, and by the fact that antiquities would now have to be treated seriously.

2. A proper archive of archaeological topography must be created so that the Division could work from complete and properly digested knowledge. As far as possible this would have to be created in advance of the known programme of the Field side of the Survey.

This knowledge would be derived from a variety of sources.

(a) The literature of the subject from Leland and Camden onwards, current publications, old cartographic material, and other documents of all kinds.

(b) Information gained from the working of a well-organized correspondent system.

(c) An examination of all available air-photographic cover.

(d) The work of the field staff of the Division.

3. A practical knowledge would have to be gained of the actual state of sites in the field which would enable a review to be made of the manner in which they had been identified, surveyed, and described in the earlier days of the Survey.

These principles gained official acceptance, and the period 1947–57 has been spent in gathering and training a staff, creating a good working record, and exploring the problems of revision in the field. There have been many other routine duties, but the main aim before the Division has been to prepare for a successful rural revision.

To carry out these duties the establishment stands today at 51 persons of whom 30 are employed on various aspects of recording and revision and 15 on field duties.

We will now deal in more detail with two main functions of the Division, recording and field work, both of which combine to produce effective revision.

RECORDING

The Division must have the knowledge from which to give proper instructions to its own field staff and to other Survey staff whom it has to advise. A secondary matter which gains in importance as time goes on is the supply of information to other State bodies engaged in archaeological work and to the general public.

In work of this kind it is impossible to ignore the county as the ancient historical unit of territorial division, apart from the fact that most local work in archaeology is carried on by county societies. The basic record therefore consists of a card index arranged by counties in numerical order of the 6-in. sheets into which these are divided. Each antiquity has its own card on which a standard series of items of information are entered such as county, precise position (National Grid reference), 6-in. sheet number, parish, character and name of the antiquity (if any), references in literature, treatment on earlier Survey plans, observations by field staff on its physical state, and, where appropriate, a photograph. Since revision is carried out by areas this purely topographic arrangement of the record is the best for the Survey's purposes. A complete set of 6-in. maps of the country with the sites indicated and numbered as they accrue acts as an index to the card system.

Since 1940 increased knowledge of archaeology generally has made an index of this kind far more extensive than it would have been in Crawford's time, though it is his own field work and his enunciation of principles in his writings which have done much to create this increase. The field side of medieval archaeology grows in complexity yearly and the need for recording surviving monuments of the Industrial Revolution introduces an element not much considered before 1940. The index also contains many details of minor finds which, although not very important in themselves, are of value in considering ques-

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tions of distribution and so provide possible clues to more important finds later and a basis for the construction of period maps. Before 1940 the Survey took the conventional view that its archaeological work ended with the year 1688, but any limitation of this kind has now been discarded.

The Division has much to do with the siting of historical events and structures and so carried on a tradition which has come down from the early days of the Survey. The net is flung wide, and even vegetable antiquities receive attention. It has long been the custom to mark and name trees which are notable in themselves or which have historical associations. In the first class come giant trees like the King Oak in Sherwood Forest or the Cowthorpe Oak near Wetherby in Yorkshire (now fallen). Trees which have been concerned with history are exemplified by the Boscobel Oak in Staffordshire, a hiding place for Charles I after the Battle of Worcester, and Kett's Oak by the main Norwich-Wymondham road which was the rallying point of the Norfolk rebels under Robert Kett in 1549. Even ancient customs where they are concerned with a strict location are noted, like the 'Penny Hedge' site in Whitby harbour.

Finally, whatever defects this record may have, it has the special advantage of constant growth in step with current events and the needs of revision. It is not static but is constantly revised as new information comes in. A time will come when it will have exhausted most of the older sources, but it will still record new developments, which, in view of current technical progress in the identification and dating of new sites, are not likely to be few.

FIELD WORK

It was already known in 1947 that the quality of the earlier surveys of antiquities varied from place to place, and the first task was to get a clear idea of the degree of this variation and of the location of the weak areas. A series of specimen counties all over the country have therefore been overhauled by field sections. Each piece of work has been preceded by a full recording of all that is known about the content of the area. Air photographs have been examined and when all has been reduced to terms of the card index it has been used to brief those conducting the overhaul. Each 6-in. plan has been examined in turn; the accuracy of the survey and of the description of the antiquities already on the plans has been tested, and a sharp eye has been kept open for things missed by the earlier surveys. The result has not been unexpected.

In general most of the obvious sites in the Lowland Zone of Great Britain appear on the plans, though corrections are sometimes necessary and a fair number of new sites picked up by air-photography and ground inspection require to be taken in, many of them ancient field systems. Thus in Hampshire the number of additions to be made is in the order of eighty.

But the position is quite different in the Highland Zone. Here great numbers of antiquities await survey for the first time. Many are not individually important, but they exist, and their recording and classification in due course is vital to an understanding of the past of these areas. An obvious case, but only one of many, is the mass of ancient agriculture which has left its traces on the limestone areas of Craven in Yorkshire. Northumberland is another critical area and from the preliminary work which has already been done on the new 6-in. survey of the highland areas of Scotland we know that many surprises are in store.

THE FUTURE

Both in recording and in field experience the Division is now able to face the general revision of the country's antiquities which will occupy much of the rest of this century.

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With the impending completion of the 50-in. survey programme the attention of the six Regions into which the country is divided for revision purposes is now turning more and more to rural revision at the 25-in. scale. The principle on which this works is priority for the populous over the thinly inhabited areas so that it may be a long time before some of the remoter areas are revised, but the process is now under way.

The rural areas of Great Britain are concerned in this process of revision at the 25-in. scale with the exception of the mountainous areas in Scotland, North England, Wales, and Devon. These mountainous areas are being resurveyed at the 6-in. scale and photogrammetric methods are being used.

Meanwhile, in considering this regional activity from the standpoint of the Archaeology Division, an important step has been taken to secure the special interests of the Scottish Region. With the development of the 6-in. resurvey in Scotland, the need for an additional archaeological effort in this area has become imminent. In order to undertake this work and to maintain closer relationship with archaeological authorities in Scotland, a sub-office has been set up in Edinburgh under the direction of the Assistant Archaeology Officer. This will be responsible for revision in the Region and also for the new 6-in. survey, and is being staffed accordingly. Here and in each of the other five Regions south of the Border a detachment of the Division's field staff will be posted. They will work well in advance of the revision programme of each Region, checking older work and surveying all the antiquities which have not been noted before. The results with descriptions will be supplied for addition to the revised plans by the Regional field staff. If not already covered in the work of the past ten years each area will be fully recorded in the Chessington and Edinburgh offices before field work is undertaken, and upon its completion all results will be laid up in the Division's card index. In this way we hope that two results will be achieved in due course; a complete cartographic survey of all the country's antiquities, and the creation of an equally complete archive of British archaeological topography.

So, given quiet times, a work should be completed before the end of this century which will fulfil the promise of the Survey's earlier work in the 19th century, and justify the memory of men like Roy, Colby, James, Close, and Crawford. It is our hope that a firm foundation will have been created on which archaeological studies can be based with confidence, and that the Ordnance Survey will have given a further example of that complete achievement within the bounds of possibility which is its legitimate boast in its other spheres of work.

Book Chronicle—continued from p. 194

THE HIGH CROSSES OF KELLS. By HELEN M. ROSE. pp. 64. *Meath Archaeological and Historical Society*, 1959. 5s. An extremely useful guide to the monuments at Kells in County Meath, the monastery to which the community of Iona removed after the Viking raids on the island. A full discussion of the iconography of the carved crosses and many drawings and photographs.

BUDDHIST CAVE PAINTINGS AT TUN-HUANG: By BASIL GRAY and J. B. VINCENT. pp. 86, 71 plates. London, Faber and Faber, 1959. £6 6s. The first book to contain a survey of these cave paintings in colour photography. Preface by Dr Arthur Waley on Buddhist thought at Tun-huang during the period of the paintings (5th to 11th centuries A.D.)

AN INTRODUCTION TO ANGLO-SAXON ARCHITECTURE AND SCULPTURE: By E. A. FISHER. pp. 104 and 48 plates. London, Faber and Faber, 1959. 42s.

Notes and News

MAGNETIC PROSPECTING: AN INTERIM ASSESSMENT

In 1957 J. C. Belshé¹ pointed out that the thermo-remanent magnetism in the baked clay of a pottery kiln should be sufficient to produce a detectable magnetic disturbance at ground level, and suggested that magnetic prospecting with a proton magnetometer² might be a useful method of finding buried kilns. An extended trial of the technique was made^{3, 4} in March 1958 when, on behalf of the Water Newton Excavations Committee, Graham Webster, B. R. Hartley, and J. P. Gillam undertook excavations on the outskirts of Durobrivae where the new route of the Great North Road was cutting through a region reported by E. T. Artis⁵ to be prolific in Romano-British pottery kilns.

The position of a kiln of which there were no surface indications was³ located precisely and it was also shown that the method was useful in finding other features, particularly filled-in pits. The technique has now been developed by experience on sixteen other sites, and one purpose of this note is to give a rough assessment of the types of site and feature to which magnetic surveying is applicable. First, however, the enormous value of magnetic surveying in rescue work will be illustrated by an outline of the results achieved on a subsequent visit to Water Newton some twelve months after the initial trial.

Construction there of the second section of the re-routed Great North Road was scheduled for the spring of 1959, and as this cut through a region some five hundred yards long to which it had not been possible to obtain access the previous year, further magnetic surveying was undertaken, once again at the request of the Water Newton Excavations Committee. The survey had a two-fold purpose, first to investigate whether there were any substantial features, particularly pottery kilns, worthy of a large scale excavation, and secondly to pinpoint any such features in order to make possible their archaeological examination in the very limited period between land purchase and the onset of road construction. In the event, the excavation of six Romano-British pottery kilns (some producing colour-coated ware) was completed some two and a half weeks after the magnetic survey party first set foot on the land and with a few days to spare before the bulldozers moved in.

The strip concerned amounted to four acres, and an aerial photograph indicated only the presence of a transverse linear feature. A general concentration of pottery fragments over an acre of the ploughed surface suggested the possibility of kilns towards one end of the site, but there were no more definite surface indications. Using two proton magnetometers, each with a team of three operators, a basic survey of the whole four acres was completed in eight hours. This basic survey, involving 900 equally spaced magnetic measurements per acre, showed three-quarters of the area to contain only one significant magnetic disturbance while in the remaining acre—the same area in which surface pottery had been noted—an appreciable number of abnormal readings were obtained. A closer investigation of these was now made, first to see which of the abnormal readings were part of the same disturbance and to pinpoint the centre to within two feet, and secondly, by studying the spatial

¹ J. C. Belshé, *Advances in Physics*, 6, pp. 192-3 (1957).

² M. J. Aitken, *Archaeometry*, 2, p. 40 (1959).

³ M. J. Aitken, G. Webster, A. Rees, *ANTIQUITY*, 1958, pp. 270-1.

⁴ M. J. Aitken, *Archaeometry*, 1, pp. 24-6 (1958).

⁵ E. T. Artis, *The Durobrivae of Antoninus* (1828).

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variation of each disturbance, to make a judgment of the maximum depth and the nature of its cause. The maximum depth can be estimated with reasonable certainty and this is useful in discriminating against surface iron; predicting the nature of the cause is mainly a matter of experience and good guesswork.

Eventually twelve marker pegs were inserted of which six were considered as probable kilns, two as pits, one as buried iron, one as a ditch running across the site, and two of very doubtful cause. These two latter were dug extemporarily and found to be clinker and cinders of modern origin. The remaining points were excavated under the direction of Mr B. R. Hartley, and of the six probable kilns one was a pit, one a pair of kilns, and the remainder single kilns. One of the supposed pits turned out to be part of a ditch belonging to a native site of Roman date, possibly the linear feature shown on the aerial photograph, and the other was associated in some way with a widespread dump of ironstone and clay, up to 27 in. thick. The supposed iron was a hoard of Roman scrap iron, and the supposed ditch was the edge of a stone-covered area, the magnetic disturbance probably being produced by a thickening of the occupation layer at one edge of it. It is evident that while magnetic prospecting is an invaluable guide as to where to dig, it is not 'archaeology without digging'.

The additional detailed measurements necessary in order to pinpoint and investigate each disturbance took as long again as the basic survey, but because it enabled an immediate start on the examination of the kilns this extra work was well worth while. A curious circumstance underlines this point: three of the kilns had been previously excavated⁶ in the 19th century, probably by E. T. Artis.⁵ From the scale on which Artis operated one presumes that he had an ample digging force available, but despite this he failed to locate three other kilns nearby (within a hundred feet), one of which lay only fifteen feet away. The conclusion drawn is that unless complete stripping of a region is being undertaken the proton magnetometer can be of great assistance in the archaeological working out from an already located feature; this is additional to its primary rôle of surveying completely unknown areas.

Because of the interfering effects of modern iron and electricity cables and because of the practical difficulty of surveying over an obstructed surface the ideal site is in the wide open spaces far from present day civilization. These considerations, coupled with the high sensitivity to filled-in pits discovered during the first trial, led P. J. Fowler to point out the particular suitability of the method for large hill-forts, and, prior to his 1958 excavation⁷ of the Iron Age Camp at Madmarston (Oxon.), two acres of the interior, devoid of surface features, were surveyed. A dozen or more pits were located, and from a comparison of the results likely to have been achieved by random trial-trenching, it was evident that use of the proton magnetometer would revolutionize this type of excavation.

The survey at Madmarston established hill-fort exploration as a rôle of equal importance to the originally envisaged one of kiln location. The method has proved useful on other types of site too, and a general idea of its scope can be obtained from the sites surveyed:—Barley (Herts.), Cox Green (Berks.), Dane's Camp (Worcs.), Dinas Powys (Glam.), Dorchester (Oxon.), Downpatrick (Co. Down), Enkommi (Cyprus), Hod Hill (Dorset), Little Houghton (Northants.), Navan (Co. Armagh), Rossington Bridge (Yorks.), Saver-nake (Wilts.), Silchester (Berks.), Stanton Harcourt (Oxon.), and Wappenbury (War.). Space does not permit details of the results achieved but it is illustrative to observe that the survey at Dinas Powys was very seriously handicapped by undergrowth and trees; that at Rossington Bridge was technically difficult because of the proximity of electricity cables;

⁶ I am indebted to Mr Hartley for permission to quote this conclusion.

⁷ P. J. Fowler, *Oxoniensia*, xxiv (1959) (forthcoming).

that at Silchester was difficult to interpret because of the superimposed phases of occupation, and at Downpatrick the proximity of modern occupation was a serious drawback because of the attendant scatter of modern iron waste. Experience in Ulster also showed that on the geologically recent (Tertiary) basalt of the Antrim plateau the disturbance due to the thermo-remanent magnetism of the igneous rocks was in general too violent to permit archaeological work. On the other hand some very limited measurements in the Cheviot Hills suggest that on older igneous structures (Devonian in this case) the rock magnetism may have decayed sufficiently for surveying to be possible.

The strong magnetic disturbance due to a kiln arises because the structure has been heated *in situ* and not disturbed since. The disturbance due to a pit, on the other hand, has no connexion with heating but arises because the magnetic properties of the filling material differ from the surrounding 'natural' into which the pit has been dug. Because of its higher humic content, soil is in general more highly magnetic than sub-strata such as rock, clay, chalk and gravel, and the chemistry of nature seems to be conveniently arranged so that the more intensive the association of soil with human occupation the stronger is its magnetism. Thus the strongest magnetic disturbances usually arise from the pits which are the most interesting archaeologically. Ditches show up magnetically for the same reason as pits, and consequently a ditch which is filled up with the same material that was dug out of it will not be detectable. On the other hand a ditch which has silted up naturally will contain a higher proportion of top-soil and is likely to be detectable. But because the concentration of decayed vegetation is rarely as great as in a pit, the disturbance from ditches is in general rather weak. The rôle of decaying vegetation in enhancing the magnetism of the soil is in the conversion of the iron oxide already present to a more highly magnetic form rather than in increasing the iron content itself. The iron content is of course important in that the relative magnitudes of disturbances due to two identical features on two different sites will depend on the relative iron content of the soils on the two sites.

The same property of magnetic forces, viz: their short range, that facilitates precise localization also implies a sharp fall-off of disturbance with increasing thickness of overlay. It is not possible to lay down a maximum depth of detection because this depends also on the size of the feature and the nature of the filling. A rough rule-of-thumb is to expect a detectable disturbance from features which are a yard across and a yard deep and buried beneath half a yard of overlay. Smaller features are often detectable however; at Madmarston where the iron content of the soil is high, a pit 40 in. across but only 15 in. deep gave a significant disturbance from beneath 20 in. of overlay, and at Little Houghton a vee-shaped gulley 18 in. across and 14 in. deep showed up strongly from beneath 7 in. of overlay. Just recently on Hod Hill⁸ where the top-soil is only a few inches thick careful measurements detected a hut-circle ditch likely to be only a foot deep in most places.

Magnetic surveying is complementary to aerial photography in that it gives exact localization on the ground and that it responds well to isolated features such as pits and kilns. Compared to electrical resistivity surveying ('the megger') it is simpler and quicker to operate and it is not affected by the dampness of the ground, but, it is not so sensitive to stone-walls and foundations. Its scope may be very briefly summarized by saying that it is a detector for hundredweights of material (except for metallic iron when it will detect a few pounds and very often ounces), and that it is particularly sensitive where fire or food has been concerned.

M. J. AITKEN

⁸ In co-operation with the Royal Commission on Historical Monuments.

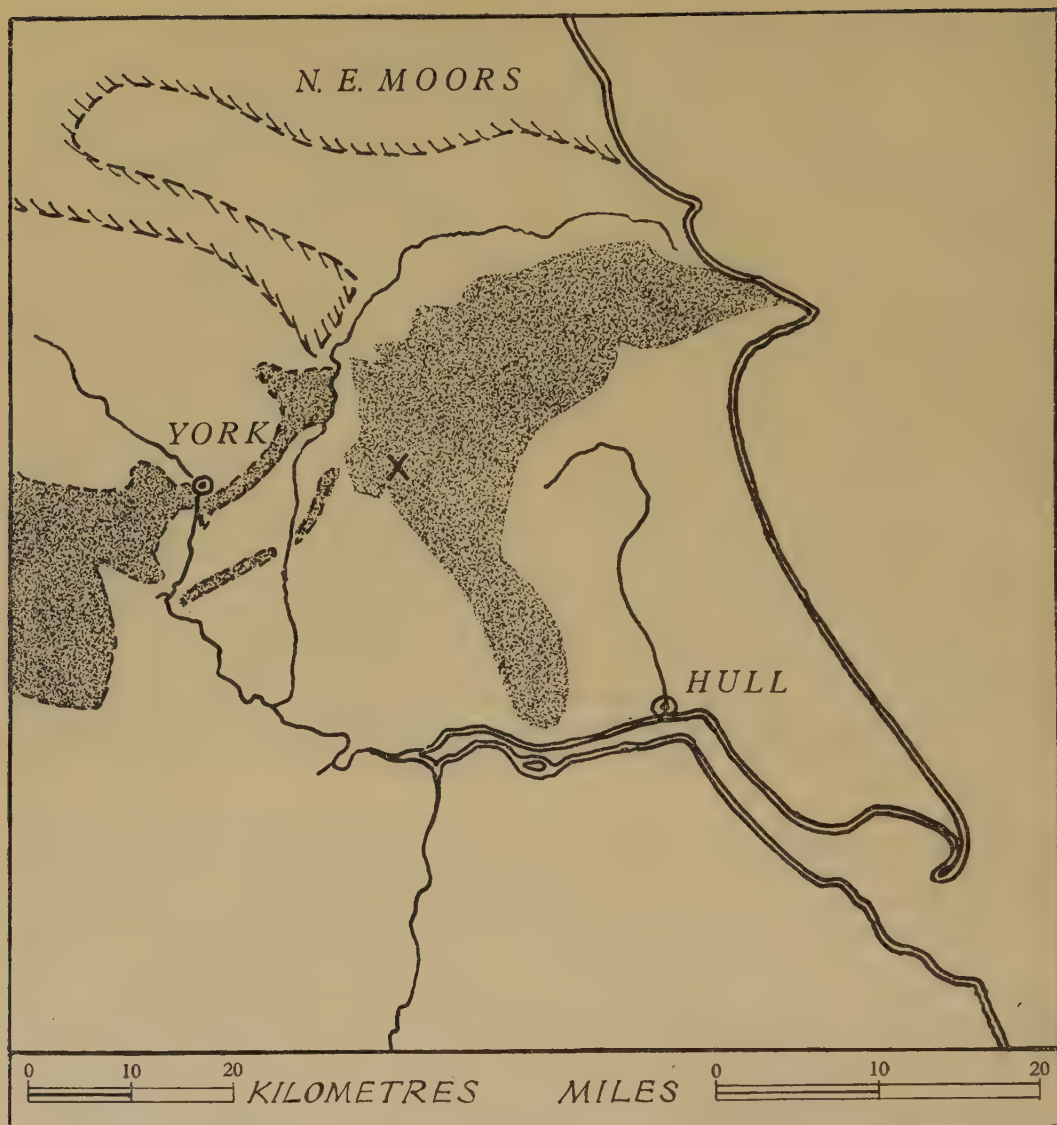


FIG. 1. Grimthorpe hill-fort, X, on the edge of the Wolds. The stippled areas to the west show the York and Escrick moraines.

GRIMTHORPE: A HILLFORT ON THE YORKSHIRE WOLDS PLATE XXI (a)

The hillfort at Grimthorpe (Grid ref. SE.816535), in the parish of Millington, East Riding of Yorkshire, was noticed on an air photograph taken in September 1958 (543.RAF.397.F. 22.0084-5), on which it was visible both as a shadow-site and a crop-mark.¹ The site is

¹ This site had been noticed previously. John Phillips, *The Rivers, Mountains, and Sea-Coast of Yorkshire*, 1853, 292, suggested that it was the 'site of an old, perhaps British settlement'. J. R. Mortimer, *Forty Years Researches . . .*, 1905, 152, mentioned it as the site of a 'camp'.

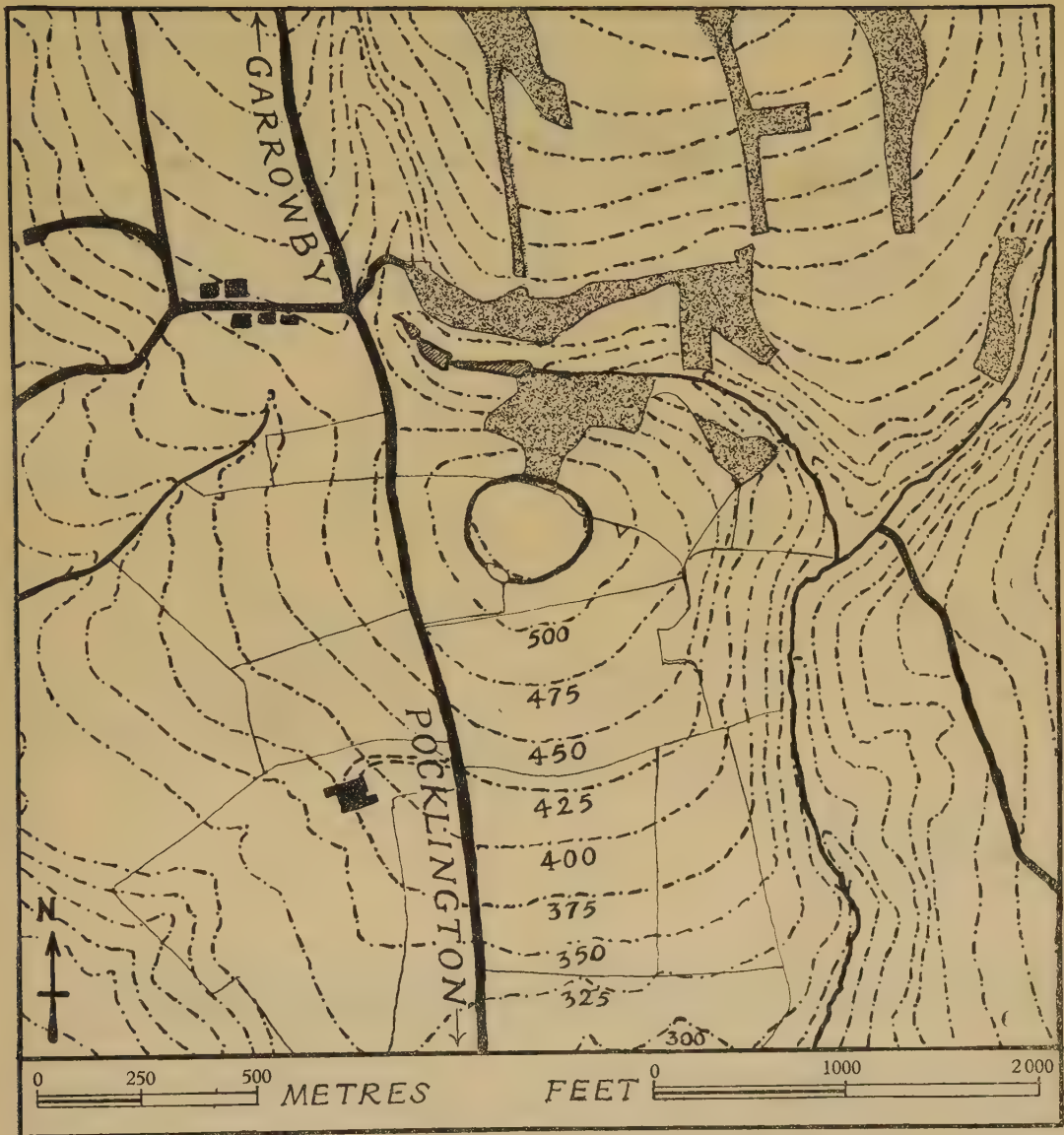


FIG. 2. The site of the hill-fort at Grimthorpe.

important partly because it is the first hillfort to be recognized on the Wolds, and partly because Iron Age burials are associated with it.

Grimthorpe is on the western edge of the Wolds, overlooking the Vale of York. The hill rises to a height of 525 ft. and is the most westerly outcrop of Lower and Middle Chalk before the Jurassic and Triassic rocks of the escarpment. It is isolated from the main chalk plateau to the north and east by Givendale and Whitekeld Dale respectively, while to the west and south the land falls away to the Vale. Although the hill is below the level of the

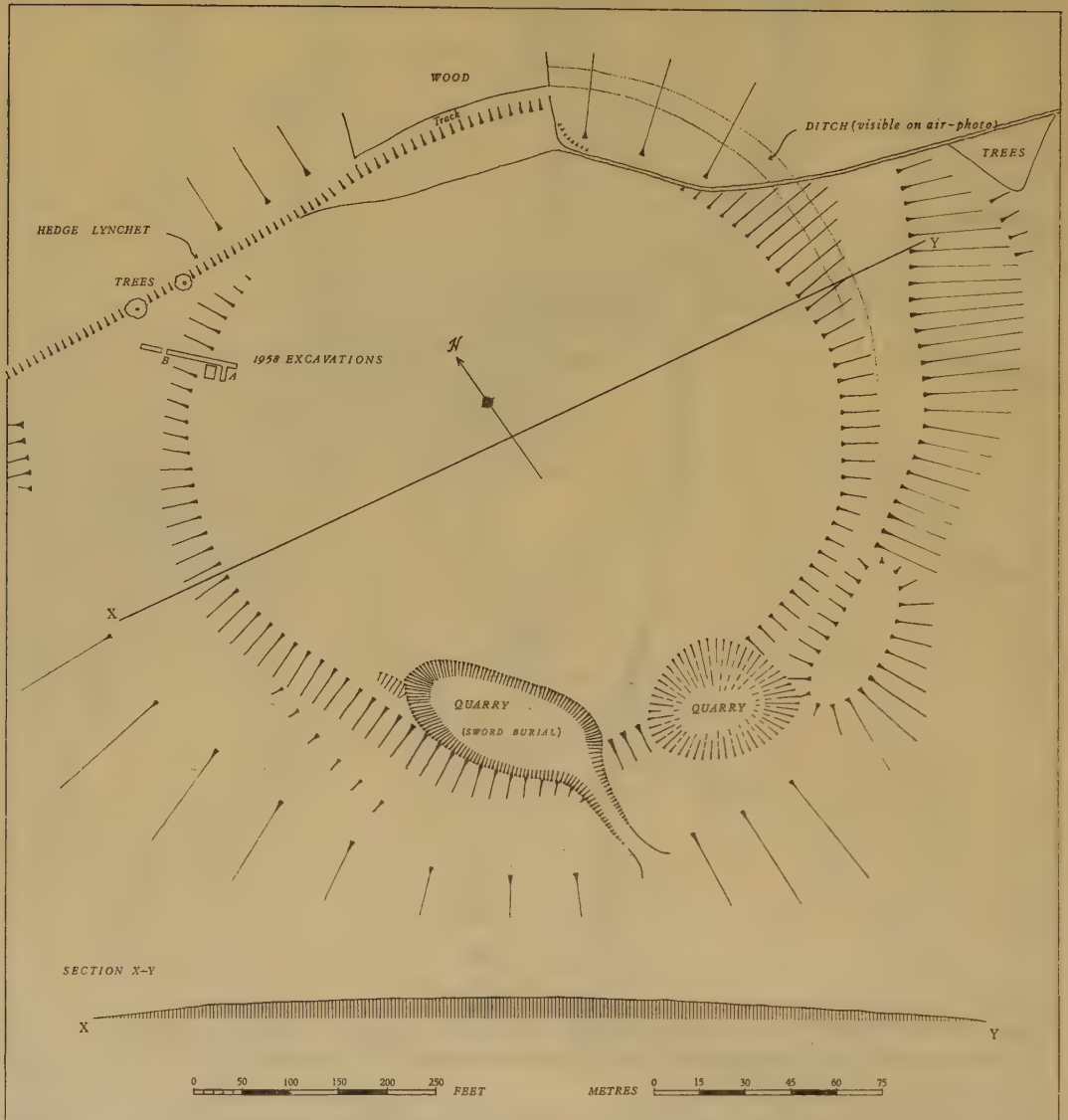


FIG. 3. Plan of the Grimthorpe hill-fort.

main western ridge of the Wolds, it has a commanding view over a wide expanse of the Vale, which suggests that the site was chosen with a view to defending the uplands from the west. FIG. 1 shows Grimthorpe in relation to the York and Escrick moraines, which were important routes across the Vale in prehistoric times. (See also FIGS. 2 and 3.)

A survey of the site, which is mainly situated in a field named 'The Bruffs', showed that in a wood on the north-western side the rampart was still standing to a height of 4 or 5 feet, but over most of its length it had been almost levelled by ploughing. The fort is approximately circular and covers an area of about 9 acres. The air-photograph suggests that there

may have been an entrance on the site of the chalk-pit, but this is not visible on the ground. The interior of the site is a slightly domed plateau, and there is no hint, either on the ground or on the air-photograph, of internal features.

Unfortunately when this site first claimed our attention the field was about to be sown with a three-year lay of grass, so that extensive excavations were out of the question for the time being. However, it was possible to organise a limited trial excavation before sowing, and this was carried out during nine days in December 1958.² This excavation (FIG. 4) was restricted to a single trench cutting across the ditch and rampart, and two

GRIMTHORPE, E.R. 1958

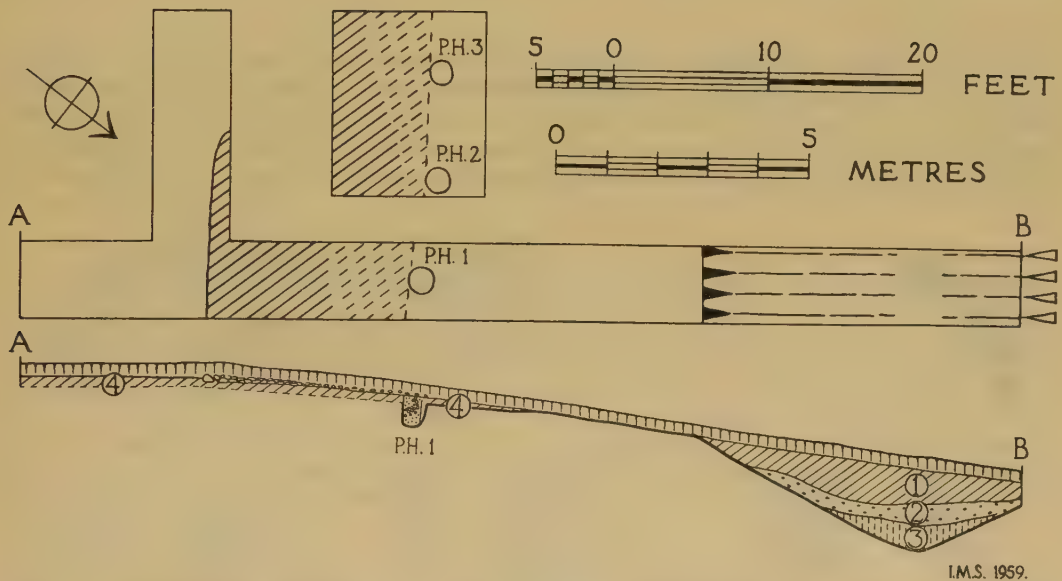


FIG. 4. Plan and section, 1958 excavation. 1, reddish-brown earth with some chalk gravel; 2, darker earth with a considerable amount of chalk gravel; 3, dark earth with fewer and larger chalk pieces; 4, reddish-brown sandy earth. Post-hole 1 projected on to this section.

extensions made to examine the structure of the rampart. The trench, 100 ft. long by 5 ft. wide, was completely excavated with the exception of a 5 ft. wide baulk. The subsoil was weathered chalk, of which there was an outcrop between the ditch and rampart³; elsewhere the chalk was covered by a thin layer of reddish-brown sand and gravel. The rampart had

² Our thanks are due to Mr C. Cawood, of Grimthorpe Manor, for permission to excavate; to the Pre-historic Research Section of the Yorkshire Archaeological Society for a grant of £25 towards the cost of the excavation; to the Inspectorate of Ancient Monuments, Ministry of Works, for the loan of tools; and to the Royal Commission on Historical Monuments (England) for facilities offered and permission to publish information gathered in the course of official investigations.

³ It appears that the substantial lynchet which almost encircles the hill, and which led to the discovery of the site on the air-photograph, is mainly this chalk outcrop, and only partly the remains of defences. On the north side of the site the ditch and rampart appear, from the air-photograph, to leave the line of the outcrop and pursue their own course slightly downslope.

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been 13 ft. wide, and was formed of lumps of chalk excavated from the ditch. At the back of the rampart the chalk was still packed quite compactly, but it was much less solid towards the front, where it had been dragged away by ploughing. The front line of the rampart was marked by a row of post-holes, three of which were found within the area excavated, at intervals of 6 ft. 6 in. and 7 ft. between the centres. The post-holes were 18 in. in diameter and respectively 2 ft. 7 in., 3 ft. 1 in. and 2 ft. 8 in. deep. In post-hole 1 the post cavity was clearly visible, the post having been 13 in. in diameter and set vertically, and not obliquely, in the hole. In front of the rampart was a berm 19 ft. wide and then a ditch about 23 ft. across and 6 ft. deep. Our trench extended for a distance of more than 30 ft. beyond the outer lip of the ditch and this area was cleared down to the natural gravel, but there was no sign of a second ditch to warrant Mortimer's use of the term 'inner ditch'.⁴

THE POTTERY

Thirty-five sherds of pottery, mostly small, were found in the 1958 excavation, mainly in the area behind the rampart and in the filling of the ditch. All the pottery is hand-made, and most of the sherds are of a thick coarse ware, with chalk and flint grit, and frequently buff on the outside and bluish-grey on the inner surface. Two pieces call for particular comment (FIG. 5, 1 and 2): these were both found in the primary silt of the ditch and are

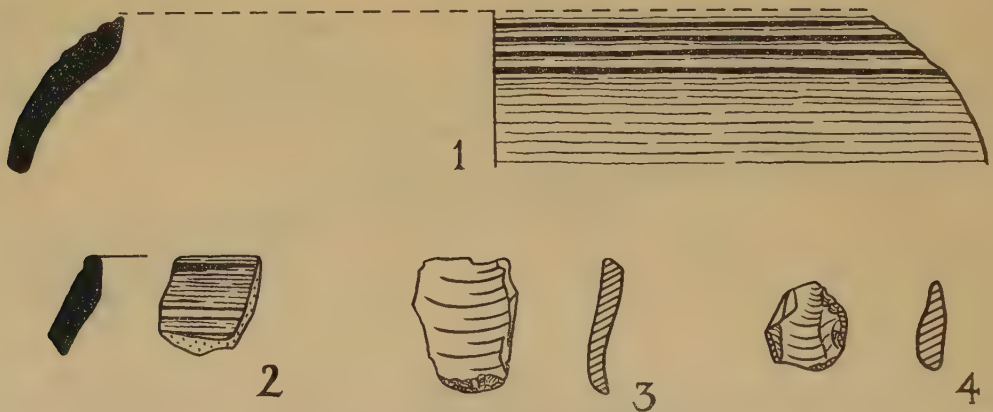


FIG. 5. Pottery and flints. (Scale $\frac{1}{2}$.)

both from the rims of bowls. The fabric is dark grey on the outside with fine chalk grit which is markedly concentrated on the outer surface, suggesting a deliberate 'dusting' of chalk; the inner surface is a light brownish-buff colour. No. 1 is ornamented with four lightly-marked horizontal grooves below the rim; the rim itself is worn and has none of the original surface; it may possibly have had a bead-rim, as No. 2. No. 2 has a slight groove just below the rim and two burnished horizontal lines lower down.

⁴ J. R. Mortimer, *op. cit.*, 1905, 152. Mortimer casually refers to the hillfort in his account of a search for burials: 'On August 20th, 1871, and the following days, we carefully searched the ground on the north, east, and west sides of the pit, over a considerable area, by making trenches about three feet apart; but only found pot sherds, and numerous pieces of animal bone, which did not seem to be connected with burials, but were mixed in the soil, more or less everywhere, and chiefly in the filled up inner ditch of a supposed camp; the south-west corner of which the chalk-pit occupies'.

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A few animal bones were found in the ditch filling, and the two flint scrapers (FIG. 5, 3 and 4) came from the top-soil.

The chalk-pit in the south-western sector of the hill-fort has been cut into the outcrop of chalk which we have noted between the rampart and ditch, and here were found the four burials which Mortimer records. These burials⁵ must have been either under the rampart or immediately behind it, and it should be noted that they are close to a possible entrance. The finds came from three graves in a triangular setting within 10 ft. of each other. (1) Found in 1868, crouched skeleton of a young man. The gravegroup consists of a Group III sword; the remains of a shield; an iron spearhead; 16 bone points, which had apparently been used to secure a wrapping for the body; and a bronze disc-brooch. Fox dates the brooch c. 70 B.C. and the sword c. 50 B.C.⁶ (2) Found 'previously', an inhumation, possibly female. (3) and (4) Found in 1871, a primary crouched inhumation partially disturbed by a secondary crouched inhumation.

There do not seem to be any particularly close parallels for the Grimthorpe bowls in Britain, and certainly not in Yorkshire, although they clearly belong to Iron Age B. It seems likely that their associations lie on the Continent rather than in southern England. Grimthorpe is the only known settlement in the area which seems to be contemporary with the East Yorkshire La Tène burials, some of which may belong to the Parisi, and it is just conceivable that, as Phillips suggested more than a century ago,⁷ this hill-fort may be the pre-Roman *Delgovicia*.⁸

D. P. DYMOND and I. M. STEAD

⁵ J. R. Mortimer, *op. cit.*, 1905, 150-2, and *The Reliquary*, ix, 1868-9, 180-2.

⁶ The gravegroup is illustrated, J. R. Mortimer, *op. cit.*, 1905, Frontispiece; cf. also S. Piggott, *P.P.S.*, xvi, 1950, 12-13; and Sir Cyril Fox, *Pattern and Purpose*, 1958, 33-5. With regard to the disc-brooch, Hemp suggested that this object was part of the shield decoration, and in his reconstruction of the shield (W. J. Hemp, *Arch. Camb.*, 7 ser., viii, 1928, 278, fig. 11) he balanced it with a similar disc which is purely hypothetical. The position of the object in the grave (together with two studs it was found 'about the chest and shoulders') shows that it could not have belonged to the end of the shield, whose boss was found alongside it. On the other hand it was in a reasonable position for a brooch. As a disc-brooch it is similar to the two from the contemporary sword-burial at Bugthorpe, both of which, like the Grimthorpe specimen, have lost the brooch attachment and are now merely discs, although one of them was recognizable as a fibula when originally found (J. Thurnam, *Arch.*, xl, 1871, 475). Complete examples of this type are illustrated by P. Jacobsthal, *Early Celtic Art*, 1944, Nos. 348a and 349.

⁷ John Phillips, 1853, *loc. cit.*

⁸ Corder and Richmond (*J.B.A.A.*, 3rd series, vii, 1942, 19) have argued in favour of four tribal centres for the Parisi, one of which they suggest may have been at Millington, which they identify with the *Delgovicia* of the Antonine Itinerary. They suggest that the four tribal centres were a pre-Roman institution, but there is no evidence for pre-Roman occupation at Millington. On the other hand, the nearby hill-fort at Grimthorpe is the only pre-Roman settlement of any size which might reasonably be assigned to the Parisi, so it would fit in very well as one of their *vici*. The absence of Roman finds from Grimthorpe would then presumably mean that the centre was moved, perhaps to Millington. But this is all very hypothetical; there is no real evidence that the small site at Millington was a *vicus*, nor that Grimthorpe, Millington, nor even *Delgovicia* were Parisian sites.

MOTTES: A CORRECTION

Miss L. F. Chitty has pointed out to me that the site in Bettws y Crwyn (*not* 'Cwrn') is associated with another in the parish of Begeildy, Rads., in which latter county (*not* Salop) are the Womaston sites.¹ Mr R. R. Clarke strongly doubts the Norwich 'siege-work' and, on reflection, I agree with him. To replace this deletion, two sites 500 yards apart at Berden, Essex, have just been published²; trial excavations indicate that one was occupied in the twelfth, the other in the thirteenth century.

D. F. RENN

¹ *ANTIQUITY*, xxxiii (1959), 106-12.

² *Trans. Essex A.S.*, New Series, XXV, part II, 256-62.

A CHARIOT BURIAL ON PEXTON MOOR, NORTH RIDING

PLATE XXI (b) and (c)

In 1911 Dr J. L. Kirk uncovered an iron tyre under a small barrow on Pexton Moor. Circumstances did not allow the complete excavation of the barrow at that time, and it was not until 1935 that work was resumed. The second excavation was supervised for Dr Kirk by Miss A. E. Welsford, who was then assisting him in his archaeology and museum-work. Miss Welsford has been very kind in placing her notes, photographs and a sketch at my disposal and these form the basis of this note. (PLATE XXI (b) and (c) and FIG. 1.)

PEXTON MOOR CHARIOT BURIAL

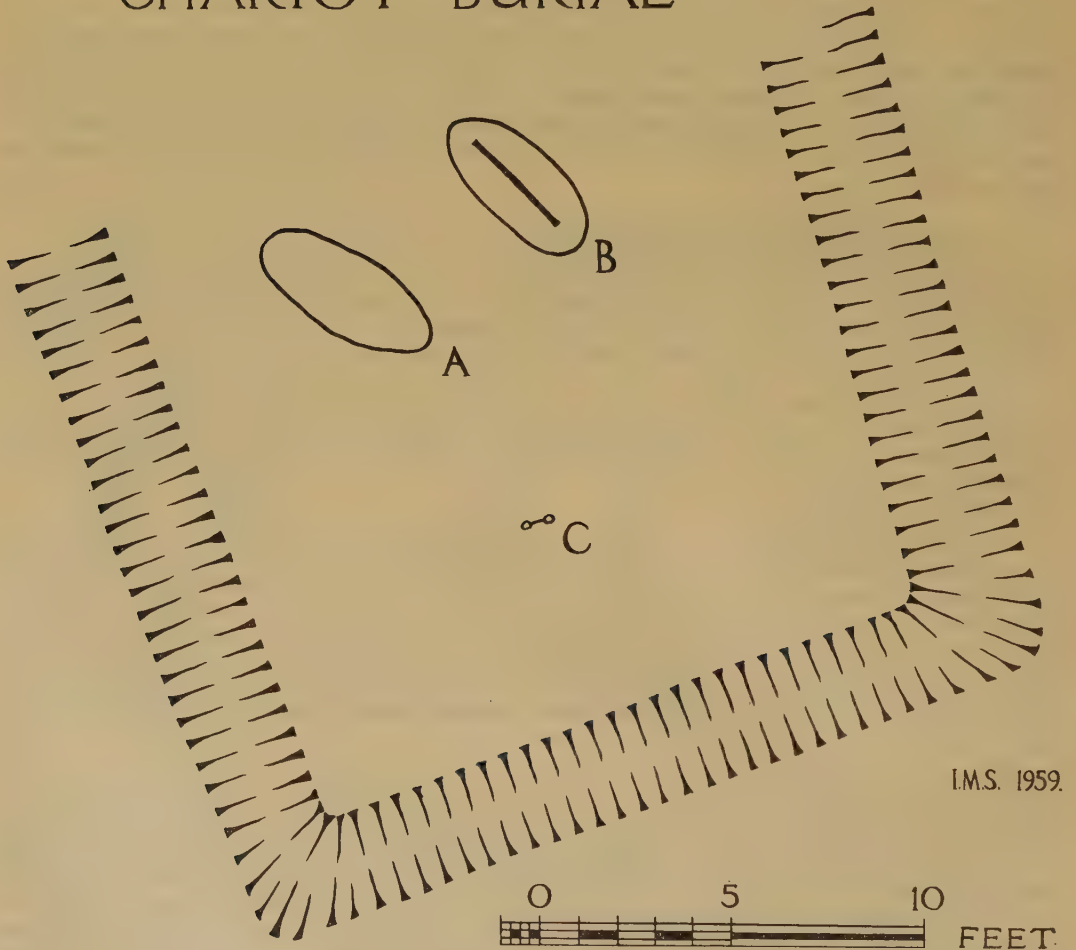


FIG. 1. Plan of the 1935 excavation, after a sketch by Miss A. E. Welsford. A, Pit in which the wheel was found in 1911; B, Pit and wheel found in 1935; C, Bridle-bit. Orientation unknown.

Pexton Moor lies on the limestone hills to the north of the Vale of Pickering, and this barrow is about a mile and a half north-north-east of Thornton-le-dale (Grid ref. SE. 848853).¹ It first attracted attention when a gamekeeper, ferreting for rabbits, noticed pieces of iron in the disturbed ground. Dr Kirk examined the site and carried out preliminary excavations, recording that the barrow was 'some 20 feet across and about 4 or 5 feet high, composed mainly of sand'.² He found an iron tyre in an upright position, with 'distinct marks of wood fibre on the inner side of this, proving undoubtedly that this was the tyre of a chariot wheel'.

In 1935 Miss Welsford found a second chariot wheel, also in an upright position, and with the iron nave-hoops still *in situ* (PLATE XXI (c)). The wheels had been buried in separate pits, about 10 in. below the floor of the grave, an arrangement which recalls some of the French chariot burials.³ The barrow was in a rectangular enclosure defined by a shallow ditch which the excavators traced on three sides. The only other find was a bridle-bit on the floor of the grave, in the position shown on the sketch plan (FIG. 2). No bones had been preserved.

It should be noted that at Pexton Moor the complete chariot had been interred, with the wheels in an upright position. This burial rite can be paralleled at only two other sites in Yorkshire, Cawthorne Camps and Hunmanby.⁴ These three sites form a small group round the edges of the Vale of Pickering, to be distinguished from the dismantled chariot burials of the Arras group which lie to the south and east of the Wolds.

The finds from the 1935 excavation are in the Castle Museum, York, and I am grateful to the Curator, Mr R. Patterson, for permission to publish them. They consist of:—

1. An iron tyre, 33 in. diameter and about 40 mm. wide. It appears to have been slightly concave on the inside. Kirk gave the diameter of the 1911 tyre as 30 in.
2. Two iron nave-hoops, about $5\frac{1}{4}$ in. and $5\frac{3}{4}$ in. diameter respectively; about 24 mm. wide.

Similar narrow flat iron nave-hoops have been found at Danes Graves, Driffield (J. R. Mortimer, *Ann. Rep. Yorks. Phil. Soc.* for 1897, 10, pl. 1, 14 and 17) and Llyn Cerrig Bach (Sir Cyril Fox, *A Find of the Early Iron Age from Llyn Cerrig Bach, Anglesey*, 1946, 95, No. 125, pls. IV and XIX).

3. A bridle-bit (FIG. 2), in a poor state of preservation. The side-rings are of iron, and one of them has the remains of a bronze casing; the rings are 62 mm. to 70 mm. and 62 mm. to 67 mm. external diameter respectively. The central link is a circular iron ring, 27 mm. external diameter and about 6 or 7 mm. thick. Each side-link consists of an iron rod with a loop at one end connecting it with the central link; there is no trace of a similar loop at the other end of either rod. One side-link is encased in a tubular bronze cover, 35 mm. long and 26 mm. external diameter; the other side-link is similar in shape, but so heavily encrusted with iron that no bronze can be seen.

This bit differs from the normal three-link La Tène type found in Britain in that the central link is a simple ring. But the type also occurs on the Continent, e.g. Grévières de Ciry-Salsogne (Aisne), F. Moreau, *Collection Caranda*, 1893 supplement, pl. 140.

¹ The exact position of the barrow is marked on one of Dr Kirk's 6-in. O.S. maps (XCII.NW), now in the Castle Museum, York.

² J. L. Kirk, *Ann. Rep. Yorks. Phil. Soc.* for 1911, 62.

³ e.g. La Gorge-Meillet, Somme-Tourbe, (E. Fourdrignier, *Double Sépulture Gauloise de la Gorge-Meillet*, 1878, pl. I), and Somme-Bionne, (L. Morel, *La Champagne Souterraine*, 1898, pl. 7).

⁴ Cawthorne Camps, excavated by Thomas Kendall about 1849, mentioned by J. R. Mortimer, *Forty Years Researches* . . ., 1905, 361. Hunmanby, cf. T. Sheppard, *Y.A.J.*, xix, 1907, 482-7.

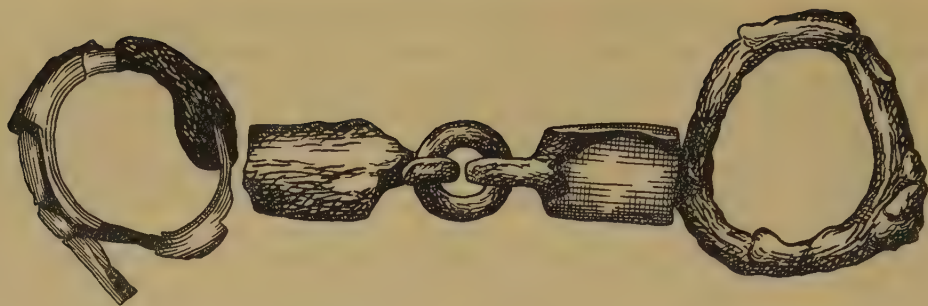


FIG. 2. Iron bridle-bit, with the remains of a bronze casing on one ring, and a bronze cover over one of the side-links. (Scale $\frac{1}{2}$.)

The cases over the side-links are a curious feature, but they can be paralleled by finds from two other Yorkshire chariot burials:

(i) *Cawthorne Camps*: cf. J. R. Mortimer, *op. cit.*, 1905, 361. Unpublished finds in the Yorkshire Museum. The two iron tyres have been displayed, presumably soon after discovery, by setting them in plaster of Paris on a board. In the centre of one is a mass of corroded pieces of iron, firmly embedded in the plaster; among these are two cylindrical iron cases, 22 mm. external diameter and of uncertain length. These must be covers for the side-links of a bit of Pexton Moor type, and it is interesting to note that the packing of wood between the cover and the side-link has been preserved.

(ii) *Danes Graves, Driffield*: J. R. Mortimer, *op. cit.*, 1897, 9, pl. I, 4 and 8, records two bridle-bits, but only parts of one of these are now preserved, with the rest of the finds from this grave, in the Yorkshire Museum. These pieces include a hollow cylinder of bronze, 32 mm. long and 17 mm. to 19 mm. external diameter, with an open joint along one side. The side-link has broken off, but the loop from the end is still attached to this cylinder. It should be noted that Mortimer's sketch clearly shows the side-links attached to the side-rings by loops.

An iron bridle-bit from London has small iron rings covering the side-links. (R. E. M. Wheeler, *London in Roman Times*, 1930, 149, pl. LIX, 2.)

I. M. STEAD

WEST BROMWICH OLD HALL

PLATES XXII-XXIV (a)

In 1956 what was known from records to be the remains of West Bromwich Old Hall appeared to be a ruined tenement building and many wanted to pull it down. Nor could they be blamed for suspecting the worthlessness of what then looked like a decayed and miserable group of slum tenements. PLATE XXII shows part of the Old Hall as it looked a few years ago. Others insisted that the site should be explored to find whether there were traces of the original manor house. They recollected that West Bromwich Manor was mentioned in Domesday Book as being held by William Fitz Ansculf, Baron of Dudley. Foremost in pleading for the archaeological exploration of these slum tenements was Mr James Roberts, an architect of Birmingham, who had already undertaken the restoration of Stratford House, Birmingham. The Manor House was reprieved and with the support of the Corporation, the Ministry of Works and the Pilgrim Trust the work of restoration has been going on since 1957. It has been directed by Mr Roberts assisted by Mr Stanley

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Jones whom, writes Mr Roberts in a letter to *ANTIQUITY*, 'I actually met in the roof space busily measuring the Manor for the Victoria County History, before it was to be bull-dozed'.

As a result of this work we have had restored to us a beautiful Manor House with a gatehouse, the whole surrounded by a moat (and possibly two moats). The photograph (PLATE XXIII) gives an impression of the restoration work as it was in June, 1959. By 1130 West Bromwich Manor was held by the Offini family and it was probably a relative of this family, William de Marnham who in 1340 built the great hall, to which were added a gatehouse, chapel and other rooms during the next two hundred years. The Great Hall is a lovely building, a small edition of the Halls of Oxford and Cambridge Colleges with a screens passage at one end and at the other a dais where the lord of the manor and his family sat, beneath an unusual and interesting curved canopy. The photograph (PLATE XXIV, a) looks towards the screens passage and shows the roof truss of the Great Hall.

When the Corporation of West Bromwich decided to save the Manor House they were only concerned with the Great Hall and were completely unaware (as were the Ministry and the Pilgrim Trust) that they had also a gatehouse and kitchen so well were they encased and built around. The gatehouse had in fact a Georgian front with a Victorian porch and had had an additional floor built on top, the passageway through being disguised as a hallway with a fireplace at the back. The whole of the timber walls were covered with wall paper on plaster on lath on battens with, beneath that again, a further layer of plaster on lath on batten. To date some 1000 tons of brick rubble has been removed from the site.

There was no record available of the moat and no sign on the ground of its existence. It was found only after several months of digging, and by tracing rainwater outwards from a glazed gully along modern pipes, thence via a small brick drain which in turn discharged into the large stone-lined vaulted drainage tunnel, the overflow outlet from the moat. The discovery of West Bromwich Old Hall has been hailed as a major architectural discovery. It is also of great archaeological interest in that in clearing away the accretions of later centuries there is ample opportunity to see how exactly a medieval house was built. The whole operation is an object lesson to local authorities; what has been done at Stratford House in Birmingham and is being done at West Bromwich should show that no building ought to be demolished until expert and extensive investigation had been carried out. All credit to the Corporation of West Bromwich, Mr Roberts, Mr Jones, their volunteer helpers and the skilled craftsmen who have rescued this fine 14th-century house.

FARNHAM CASTLE

When I wrote the note on the Farnham Castle excavations for the last number of this journal (*ANTIQUITY*, 1959, 124), I was concerned to point out parallel instances of the incorporation of motte-towers in their mounds. The Ministry of Works press release, which prompted my comment, appeared to claim that by the fact of its incorporation in the mound the Farnham Castle tower was unique. However, Dr Michael Thompson, of the Inspectorate of Ancient Monuments, has since told me that this claim was not intended to refer to the fact of such incorporation, but to the manner in which it was carried out. This was not described in the press release, whereas I had assumed that the reason for the claim of uniqueness lay in the facts given.

Dr Thompson tells me that within the mound the dimensions of the lower part of the tower are reduced, so that the upper part overhangs the lower. This is certainly remarkable and unparalleled, and now that I know the full basis and relevance of the claim I endorse it unhesitatingly.

BRIAN HOPE-TAYLOR

A SO-CALLED GREEK RHYTON FROM LONDON

PLATE XXIV (b)

In the Guildhall Museum is a pottery cup or rhyton (No. 15025; Old No. 1938.220) with a trumpet-shaped mouth and the bottom modelled in the form of a ram's head (see PLATE XXIV (b)). The cup is made in a brown clay with a rather soft creamy-buff surface. It has been painted on the outside and the inside of the mouth with a dark grey watercolour, most of which is now gone. This rhyton is very small, being only 11 cm long. The handle is broken away and missing.

In 1909 this object was stated¹ to be from Billingsgate and to be in the possession of Mr W. Ransom of Hitchin (who brought together a large and notable collection of antiquities from London, the greater part of which is now in the London Museum, given by his son in 1915). How and when the Guildhall Museum acquired it is not now known, but it was before 1934, when the rhyton was described as being at Guildhall, with the statement; 'An apparently contemporary label, stuck inside the cup, says that it was found during excavations for the building of the new Fish Market at Billingsgate. Whether this refers to the erection of the market in 1849-53, or its subsequent enlargement in 1874 is not clear.' This label is now missing.²

The fabric of the cup shows it to belong to a large group of modern copies of antiquities which were made in the Naples area and sold as souvenirs during the earlier part of this century, and perhaps a little before then (I have not as yet been able to trace them back further than 1906, unless the label on this cup can be taken at its face value). Some are direct copies of objects in the Museo Nazionale at Naples, and a few from other museums, but many seem to be pure fabrications in antique style and not based upon ancient originals at all. The rhyton seems to be a case in point: it is extremely small, the mouth of the object is moulded with the animal's head, which is most unusual in genuine Greek vases of this form, the mouth being thrown on the wheel and luted on to the moulded head, and the mouth itself is not really the right shape, being too narrow where it joins the head. Its inspiration, of course, was the much larger Apulian rhyta of the 4th and 3rd centuries B.C.

A representative collection of these modern copies is shown on Pl. 296 of Spinazzola, *Le Arti Decorative in Pompei e nel Museo Nazionale di Napoli*—where they are presented as genuine antiquities. The objects in this group are made in a grey or brown clay, with often a buff surface; they are usually painted dark brown, but other variations in colour are used. They often have an applied incrustation, rusty brown in colour. Hundreds must have been produced: they are constantly to be seen in the shops of antique dealers and on stalls in markets. They have a wide distribution. Examples of this group are to be found in the British Museum,³ the London Museum,⁴ the Louvre,⁵ and museums at Prague,⁶ Warsaw,⁷ and Mainz.⁸

One would like to know when Mr Ransom obtained the rhyton, supposedly from Billingsgate. The label described above is not particularly helpful. Did Mr Ransom write this himself from information given when the cup was acquired? or was it already attached? Could it not be that this label referred to some other object from which it became detached, and was then stuck to the rhyton in error? If the label *was* fixed to the object

¹ *Victoria County History of London*, Vol. 1, p. 88.

² *J.B.A.A.* (New Series), 39, p. 389; see also p. 401, fig. 15.

³ *BM Cat. Lamps* 403; 758; 789, and several unpublished.

⁴ No. 37.124 (unpublished).

⁵ Unpublished—information supplied by Dr J. Frel, Caroline University, Prague.

⁶ *Sborník Národního Muzea v Praze*, Series A, Vol. xxii, 1-2, p. 108, note 1, and Nos. 88 and 113.

⁷ M. Bernhard, *Lampki Starożytnie*, pls. 50-52, and perhaps a few more.

⁸ H. Menzel, *Antike Lampen*, Mainz, fig. 61, 10, and probably fig. 34, 7.

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when the work at Billingsgate was but recently carried out, and the cup sold as coming from there, it would take the group of copies to which it belongs back into the last quarter of the 19th century (surely the 1849-53 work cannot apply here?).

But whatever might have been its earlier movements, we have here an object, made within the last hundred years, which has been used to supplement the evidence for trade or contact with the Mediterranean world in pre-Roman times.⁹

D. M. BAILEY

⁹ *J.B.A.A.* (New Series) 39, p. 398; *Atti del 1° Congresso Internazionale di Preistoria e Protostoria Mediterranea* (1950), p. 322; I. Noel Hume, *Treasure in the Thames*, p. 54 (but see p. 240, where he doubts its value as evidence).

LEARNED SOCIETIES AND COVENANTS

For many years learned Societies devoted exclusively to science, literature, and the arts have ranked in law as charities exempt from the payment of income tax on their income from investments.

Fifteen years ago the Society of Antiquaries invited its Fellows to enter into seven-year covenants for their annual subscriptions. In the years that followed very many other learned institutions, national and local, followed suit. In such covenants the covenantor promised to maintain his annual subscription for seven years and declared that he received no personal and private benefit from it, that is, that his subscription was to enable the Society to fulfil its charitable purposes as a learned Society. Covenants are binding contracts terminable only by the death of the covenantor, but they entail no additional payment from him and are not a charge upon his estate after his death.

Those Societies whose members entered into covenants received considerable financial benefits as a result, for they were entitled to recover for their own use the tax at the standard rate on the gross amount that, after deduction of tax, would produce the net cash subscription of each covenantor. With income tax at the level at which it has stood since the war this, in effect, almost doubled the value of each covenantor's subscription without any additional cost to him, and often enabled societies to maintain their work, in particular their publications, in a period of rising costs without having recourse to raising their subscriptions.

Three years ago the practice had become so widely adopted that the Inland Revenue evidently determined to put an end to it or to limit its application. They refused a refund on the covenanted subscriptions of the National Book League, and, when the case was taken to court, the decision of Mr Justice Vaisey was subsequently upheld in the Court of Appeal. Although the case of a true learned Society is by no means similar to that of the National Book League, which, among other things, provided club facilities for its members, the Inland Revenue withheld repayment of income tax on the covenanted subscriptions of nearly all learned Societies, including the British Academy, the Society of Antiquaries, the Royal Archaeological Institute, the Roman and Hellenic Societies and a number of county archaeological societies.

In July 1957 the President of the Society of Antiquaries convened a meeting at Burlington House of representatives of some thirty learned Societies affected by this decision for the purpose of considering what action should be taken. It was agreed that the Officers of the British Academy and the Society of Antiquaries should present their case in detail to the Board of Inland Revenue, in the hope that the matter might be settled out of court. The Board, however, after long delay, confirmed their ruling, and the two institutions were forced to appeal against it to the Special Commissioners of Income Tax. Many societies decided to await the result of this appeal, while others separately presented their own cases to the Commissioners.

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In January 1959 the case was argued in full on legal grounds before the Special Commissioners, who sometime later gave written judgment in favour of the Societies, upholding their appeal against the Inland Revenue. Notice of appeal was lodged by the Inland Revenue, and only finally withdrawn on 22 April, 1959. The effect of this judgment is that all learned Societies who have in the past successfully claimed return of tax on their members' covenanted subscriptions are once again entitled to do so; and outstanding claims against the Revenue have in some cases already been met.

The gratitude of all those societies who have benefited by the happy outcome of this protracted struggle are due to Lord Nathan, F.S.A., Honorary Legal Advisor to the Society of Antiquaries, who put the whole resources of his well-known firm of lawyers at the disposal of the British Academy and the Society of Antiquaries, and to Mr F. N. Bucher, Q.C., who, supported by Mr H. H. Monroe, so ably presented their case to the Special Commissioners.

PHILIP CORDER

THE ALPHABET MUSEUM

On 8 June Mr I. J. Pitman, M.A., M.P., opened the Alphabet Museum and Seminar at 50 St Barnabas Road, Cambridge. This Museum was planned and is directed by Dr David Diringer, Lecturer in Semitic Epigraphy in the University of Cambridge. It is built in Dr Diringer's garden and access to it by bona fide students of writing and the alphabet can be had at any time by arrangement with Dr Diringer (Telephone: Cambridge 55924).

Linked in a sense with this museum is one in Hawaii belonging to a scholar, Mrs Ruth K. Hanner, who is concerned, generally speaking, with prehistoric symbols; it was with the financial help of this scholar, who wished for a European counterpart where prehistoric symbols and written characters of later ages might be collected and studied, that the present museum was built.

Dr Diringer's work on the development of writing and the alphabet is already well known and his English book *The Alphabet*, first published in 1948 (following on his previous Italian work, published in 1937, on *The Alphabet in the History of Civilisation*), is now a standard work of reference. Thirty-five years of research by Dr Diringer have gone into this museum, which houses a very large collection ingeniously arranged in a small space. It includes original inscriptions on stone, casts of inscriptions, fragments of manuscripts, photographs, charts and maps. On entering the museum the visitor first sees a striking wall chart, the Alphabet Tree, measuring 12 ft. by 12 ft., and showing how some 350 alphabets are interrelated. It shows how some scripts have died out and others survived to influence yet others in curious ways. This museum provides a more comprehensive and scholarly archive that has been attempted before and it is fair to say that as a documentary on the development of script, it is unique in the world.

Dr Diringer invites the co-operation of readers of ANTIQUITY in sending him any material that might bear on the history of writing or the development of any special scripts or styles.

THE MESOLITHIC

Dr Carl-Axel Moberg, Director of the Archaeological Museum at Gothenberg, comments as follows on the note published in the last number of ANTIQUITY about the origin of the term Mesolithic (ANTIQUITY, 1959, 130).

Miss Wilkins has written an interesting and convincing note on the origin of the term 'Mesolithic'. In Sweden, for many years, there has been a belief that this term was first suggested by Otto Torell, a professor of geology in Lund, who used it in 1874 at the

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International congress of Anthropology and Archaeology in Stockholm, as stated by Dr Nils Niklasson of the Gothenburg Archaeological Museum in *Fornvännen*, 1955, p. 46 ff. Obviously this was eight years later than Westropp's address to the Anthropological Society.

But nevertheless, Dr Niklasson's statement is of interest, as it proves that Westropp was not quite isolated in this respect, and shows that this term could be used during an international meeting eighteen years before J. Allen Brown's paper of 1892, mentioned by Miss Wilkins.

WEATHERING AND DESTRUCTION

At the meeting of the British Association for the Advancement of Science in Glasgow in 1958 there was discussion of the processes of soil movement and weathering, and the activity of biological agencies that result in the burying of archaeological structures. It was agreed that more data on these processes and more precise knowledge of the rates of denudation would be of great interest to field archaeologists. Accordingly a committee was set up to investigate by experiment the denudation and burial of archaeological structures; the Chairman of the Committee is Dr G. W. Dimbleby of Oxford, the Secretary is Dr P. Jewell (*Department of Physiology, Royal Veterinary College, Royal College Street, London, N.W.1*), and the other members Professor R. J. C. Atkinson, Dr I. W. Cornwall, and Dr B. Proudfoot.

One type of experiment which the committee aims to establish is to build simple structures, such as a ditch and bank, laid down to precise measurements, and then to follow the rates of ditch silting, denudation and spreading of banks, turf formation and soil compaction, and other changing features over the following years. Various sorts of markers would be incorporated in the structure to facilitate these measurements. At the same time observations on changes in the soil profile, the nature of the buried turf line and the activity of earthworms in burying large and small objects would form an integral part of the experiment. In addition, information could be gained on the fate of a variety of buried materials—wood and charcoal, bone, cloth, leather and metal.

The Secretary (Dr P. A. Jewell) will be glad to hear from anyone who has suggestions to make, and from anyone who would be interested to participate in the practical aspects of the work.

CONFERENCE ON INDUSTRIAL ARCHAEOLOGY

The Council for British Archaeology has recently formed a Research Committee on the subject of the Archaeology of the Industrial Revolution. The Committee includes archaeologists, economic historians, geologists, architects, technologists and others interested in surviving industrial remains of the 17th to 19th centuries. It is hoped that the committee will be able to draw into a programme of planned recording and research the wide variety of interests in the subject. The Committee's first project will be a public conference held on Saturday, 12 December, 1959, at the London School of Hygiene and Tropical Medicine, Keppel Street (Gower Street), London, W.C.1. For further information write to the *Assistant Secretary, Council for British Archaeology, 10 Bolton Gardens, London, S.W.5*.

Reviews

ATLAS OF THE EARLY CHRISTIAN WORLD. By F. VAN DER MEER and CHRISTINE MOHRMANN. Translated by MARY F. HEDLUND, M.A., and H. H. ROWLEY, M.A., B.Litt., D.D., LL.D., F.B.A. *Nelson, London and Edinburgh, 1958. pp. 216, 620 plates and 42 maps. 70s.*

In a short foreword to this finely produced volume, Professor Rowley tells us that 'in recent years we have become accustomed to works bearing the title of "Atlas" which offer much more than a collection of maps'. This may be so, but at the same time the primary *raison d'être* of an atlas is to provide accurate maps, and its success can only be measured in terms of the accuracy of those maps, whatever the merit of the accompanying text and photographs.

Considering the scope of the present work and its high quality as a book of reference, it may seem unfair to cavil at minor inaccuracies; on the other hand, these do exist, particularly in the case of maps of Asia Minor. This is, of course, an area beset with many more pitfalls than most for the cartographer, and unfortunately the authors and editors have not altogether avoided them, for there are several sites wrongly or inconsistently located. To quote only three obvious examples, we find in Map 14 that Adrassus (?), in Isauria, is placed slightly north of the Ermenek Su, but in Map 16 on the Calycadnus. In Cilicia (despite all the evidence to the contrary), Flaviopolis is identified with Sis, which is in any case now called Kozan; while Epiphania appears well to the north instead of to the south of the Amanian Gates. The spelling of Turkish place-names is chaotic, the new orthography being used (often incorrectly) side by side with the phonetic transliterations of 19th-century European travellers. Binbir kilise (The Thousand and One Churches), in Lycaonia, appears as Binbirkalesi, which is meaningless. Kanli Divane, in Cilicia, becomes Kanidiwan. The adoption by scholars of the modern Turkish orthography (certainly no more complicated than those of Polish and Hungarian, which are generally accepted) would put an end to this sort of confusion. In the table of conventional signs attached to Map 14, the word 'church' with its general application would surely have been preferable to 'basilica', which has a specialized connotation.

At this point, however, criticism must give way to gratitude to the authors for an atlas which deserves, and will certainly get, a warm welcome from all who interest themselves in the history, archaeology and art of the Early Church. As Professor Rowley claims, the maps provide a short cut to information which would otherwise have required a very considerable period of research over a wide field; moreover, the material is so varied and so comprehensive that there are few aspects of the life of the Early Church that are not covered by one or more of the maps. Some illustrate the growth of the Church, century by century; others are distribution maps of churches, monastic foundations and other Christian monuments. The various Dioceses of the Christian world together with their bishoprics are separately treated; so are the cemeteries, memoriae and parish churches of Rome. The early fathers and writers of the Church can be found in another series of distribution maps. Not even the Pilgrimage of Egeria to the Holy Places is forgotten.

The arrangement of the photographs and text, which illustrate the maps, in three sections

entitled 'The Church of the Martyrs', 'The Church of the Empire' and 'The Fathers of the Church and Early Christian Literature', is logical and easy to follow in its many subdivisions. The quality of the 620 plates is uniformly good, and the illustration of important inscriptions and papyri, as well as of the more usual churches, mosaics, frescoes, ivories and *objets d'art*, is a welcome sight indeed. On the other hand, it is disappointing to find the monuments of Syria and Asia Minor, which are among the most important in the world, so sparsely illustrated, and so often by drawings rather than by photographs.

The text, which has been well and unobtrusively translated, is authoritative and interesting, and enlivened by frequent quotations from contemporary or near-contemporary literature. There have been a few slips in proof reading: e.g. the date of Diocletian's retirement is wrongly given as A.D. 205 on p. 57. Koca Kalesi, in Isauria, described on p. 106 as 'one of the earliest cupola basilicas', did not in fact have a dome, while on p. 47 the authors appear to subscribe to the dubious theory of the translation in A.D. 258 of the relics of St Peter from the Vatican cemetery to the Basilica Apostolorum on the Appian Way; but these are minutiae and in no way detract from the overall excellence of the text.

It is the reviewer's task to criticize; it is no less his privilege to give honour where honour is due. This reviewer, at all events, has received much instruction and great enjoyment in reading this outstanding book, and is convinced that all those fortunate enough to possess it will hold it in the same high regard.

MICHAEL GOUGH

THE ART AND ARCHITECTURE OF ANCIENT EGYPT, in 'The Pelican History of Art'. By W. STEVENSON SMITH. *Penguin Books*, 1958. pp. xxvii + 290, with a map and 77 figures in the text, and 192 pp. of plates. £3 3s.

The editor of 'The Pelican History of Art' made a wise choice when he asked Dr Stevenson Smith, Curator of the Egyptian Department of the Museum of Fine Arts, Boston, to write this volume, for he has a profound knowledge of the subject and the ability to convey it in a concise, lucid and straightforward fashion. His book is written for the general reader, but will also be indispensable as a reference work, both for the bibliographical value of the notes and for the unpublished or relatively inaccessible material contained in it. It is certainly the best general book on Egyptian art to appear for some years.

In accordance with the aim of the series, the book is historical in plan. Both text and plates, with very minor deviations, are arranged chronologically and cover the period from about 4000 B.C. down to Graeco-Roman times. A brief summary of the dynastic history of Egypt is included in the introduction. It is supplemented, however, in the individual chapters by concise but factual accounts of the historical background, at least one of which—that concerned with the beginnings of the Amarna period—is an original contribution to this much-disputed topic. The author's decision to treat the historical background so thoroughly despite the restricted space at his disposal cannot have been an easy one, but will be welcome to the general reader.

An admirable feature of the work is its economy. This is most striking in the choice of the plates and text figures, to which Dr Stevenson Smith clearly gave most careful thought. With so wide a field to cover, he has succeeded in keeping a fair balance between the claims of architecture, sculpture in the round, relief, painting, and the various minor arts, without leaving any period inadequately represented. He has illustrated nothing that is not a masterpiece of its kind; and while he has reproduced many familiar pieces, he has clearly striven to include less well-known works where they suited his purpose. He has been particularly ingenious in selecting works which, while among the finest of their period and class, also provide good comparative material for the development of style or of decorative motives;

some illustrations are referred to in many different parts of the text. In almost every case where a piece illustrated belonged to the architectural scheme of some building, either a plan or an axonometric drawing of this or some similar building is to be found in the text or plates; this impresses upon the reader the close integration of architecture, sculpture, painting and relief in ancient Egyptian buildings, in a way which no amount of reiteration in the text might have succeeded in doing. Dr Stevenson Smith's choice will not of course please everybody, for many famous pieces are necessarily omitted; but all must surely welcome the illustrations of the Middle Kingdom material from Kerma, the New Kingdom palaces at Deir-el-Ballas and Malqata, and the Meroitic temple sculptures, which are strangers to general works on Egyptian art. In the choice of sculpture, reliefs, and minor objects, the author shows a certain bias towards American collections, of which he has unrivalled knowledge; but this is unobjectionable, since some of these are not as well known in Europe as they deserve to be. In every instance the author has clearly studied to obtain the best available photograph or drawing, and the reproduction is almost uniformly excellent.

The text as a whole is distinguished by the author's clear, smooth expository style, which mercifully shuns pedantry and journalese alike. His flair for significant detail, familiar to readers of his monumental *History of Egyptian Sculpture and Painting in the Old Kingdom*, is again in evidence. The book is not light reading, for to appreciate the author's argument constant reference to the plates is necessary, and it will yield its full reward only to those fortunate enough to be able to pursue the copious and accurate references in the notes. Nevertheless, the text forms an independent and coherent story, which if not lively is always lucid.

The most difficult problem confronting the author of a general work of predetermined length is plainly what to leave out. Dr Stevenson Smith has drawn a firm line; broadly speaking, he describes what the Egyptians did, and leaves out how and why they did it. This does not mean his study is superficial or lacking in detail. He never fails to tell us the provenance and situation, the material and colour, the artistic technique and effect of any piece he describes; and he manages to pack in a surprising amount of detail about the development of decorative features and patterns and their associations outside Egypt. His omission of the fascinating but difficult problems of the methods of Egyptian craftsmen is justifiable, since this is a history of art and not of technology, and the matter is adequately treated elsewhere. His failure to discuss at any length the reasons why the Egyptians adopted some of the basic forms and representational methods they did was probably also inevitable in the space available; but is responsible for a certain aridity, particularly in his treatment of architecture. There is, for example, little attempt to suggest the conflicting influence of cult and cosmology on temple plans and decoration, and for this reason the chapter on the Ramesside period is the weakest in the book. Also, though the matter is briefly referred to in the Introduction, the part played by religion and magic in dictating Egyptian conservatism in artistic matters is under-emphasized. This determinedly unspeculative approach, together with the author's reluctance to impose his own aesthetic opinions on his readers, result in a notable contrast with the companion volume which the late Professor Henri Frankfort contributed to this series on the Art and Architecture of the Ancient Near East.

But his factual art-historical approach has enabled Dr Stevenson Smith to find space to emphasize throughout the evidence, often very fragmentary and scattered, for those manifestations of Egyptian art which have barely survived and have consequently been neglected. The chapters on 'Minor Arts and Foreign Relations in the Middle Kingdom' and 'New Kingdom Domestic Architecture' are especially useful in this way; other examples abound

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in the notes. These are in smaller type than the text, but maintain a high standard of clarity and accuracy. For so lavishly illustrated a volume the price is not high; and altogether the book reflects credit on author, publisher, and printer.

H. S. SMITH

THE EXCAVATIONS AT MAHESHWAR AND NAVDA TOLI, 1952-53. By D. D. SANKALIA, B. SUBBARAO and S. B. DEO. *The Deccan College Research Institute and Maharaja Sayajirao University Pub. No. 1, Poona-Baroda, 1958. pp. 255, 3 coloured plates + 18, 152 figures, 4 maps. Rs. 35.*

TRIPURI, 1952; being the account of the Excavations at Tripuri. By M. G. DIKSHIT. *Nagpur, 1955. pp. 139, 44 plates, 46 figures. Rs. 12.*

Reconnaissance had indicated Maheshwar as a site of considerable importance, the probable location of the town of Mahishmati at the crossing of the Narbada on the main route between Northern India and the Deccan, which showed traces of proto-historic occupation. Excavation resulting in the report under review was carried out at Maheshwar and Navda Toli in 1952-3 and has recently been resumed. The proto-historic expectations were amply justified by evidence of an important chalcolithic culture with interesting varieties of painted pottery including channel-spouted pots, fairly common in Iran but very scarce in India. A definite criticism is the absence of a map showing Maheshwar in relation to all other archaeological sites in Malwa and the north Deccan, and also a site map of Maheshwar-Navda Toli showing the location of all the nine mounds mentioned.

In establishing chronology, the dating value of Northern Black Polished Ware (N.B.P.) is rightly stressed. It is unfortunate, however, that the table showing 'the relative distribution of the crucial pottery types' (p. 31) fails to account in detail for the thirteen stratified sherds recovered (p. 133) and does not tally with the notations of N.B.P. recorded on the section given in fig. M. Dating is somewhat conjectural, but taking the earliest N.B.P. and punch-marked coin in level 15 of this section as being about 250 B.C., then this occupation at Mound II would have started early in the 4th century B.C. The construction of a stupa at Navda Toli seems to have been brought to an end by a flood which occasioned a move of population to the north bank. This stupa, as suggested, is almost certainly of the same date as those of Kasravad only 4 miles away, and these are unlikely to be earlier than 230 B.C. and may well be later.

Apart from the few points noted above, this is a very well produced report. The site plans given are excellent; the corpus of pottery is first rate, and the idea of having the main types in colour with the complete record in line drawing is most commendable; the standard of line drawing is very high, and no student should have cause for complaint on the score of poor or inadequate illustration.

The technical sections are well handled. Too much prominence is perhaps given to the crested guide-flake in discussing the blade industries; its absence may well be fortuitous in any particular group. On p. 68 Tal-i-pir, Haraj (correctly), is in Laristan, and the other sites mentioned as producing flake blades are in Fars (Persis). Beads were plentiful, but unfortunately an interim report on the beads recorded a large number as of faïence, subsequently shown to be burnt steatite (p. 181). Burnt steatite, it is true, can be associated with the Harappa culture, but faïence as a manufactured substance has greater cultural importance. Terracotta figurines are scarce, and birds which are compared with Harappan examples can as easily be paralleled at Taxila. Pottery discs carefully ground from potsherds (p. 195) are given the prominence they deserve. Found all over the sub-continent on sites dating from Harappan down to medieval times, they must have been weights, though statistical proof is difficult. Carbon-14 dates obtained from four samples submitted to the

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Physics Department of the University of Pennsylvania indicate a range of c. 1500–1000 B.C. for the chalcolithic period. It will be interesting to see whether future tests bear out these dates, which are about 400 years earlier than previous estimates, and also what dates emerge from similar levels at other sites. This very reasonably priced report is essential reading for any student of Indian archaeology.

The report on the excavations at Tripuri about 8 miles west of Jabalpur deals with an exploratory dig undertaken by the University of Saugar and supervised by Dr M. G. Dikshit. The site is of considerable importance as, next to Suktimati, Tripuri was the second city of the Chedi tribal janapada and issued its own coinage early in the 2nd century B.C.; subsequently it became a Kalachuri capital in about A.D. 875. Its geographical position is important, and a route linking the Jumna with the Narbada ran from Kausambi and Bhita to Tripuri. Within the limits of the area excavated good results were obtained, and evidence was unearthed of successive occupations from an early Chalcolithic phase with a black-on-red painted ware and microlithic blades, through a Mauryan occupation with Northern Black Polished Ware and punch-marked coins, a city state period of 180–40 B.C. followed by Buddhist and Andhra influences to A.D. 200, after which political status up to the 5th century A.D. is vague. Dr Dikshit's dates for the historic period are somewhat earlier than these.

Maps, though a trifle sketchy, are adequate and the sections are clearly drawn and fulfil their purpose. The half-tone plates are good, but four devoted to soak-pit A are two too many. There is an excellent, well-illustrated and well-described corpus of pottery. What may prove to be an important cultural landmark is a pottery found in the Mauryan and city state levels having a high gloss which has been shown by analysis to be salt glazing. Beads, which are Dr Dikshit's speciality, are well handled. This valuable report shows clearly that a more extensive exploration of the Chalcolithic levels would be of the greatest help in solving the problems of that still very enigmatic period.

D. H. GORDON

THE BEGINNINGS OF CHRISTIAN ART. By D. TALBOT RICE. *Hodder and Stoughton*, 1957. pp. 223, 48 plates, 21 figures. £2 2s.

Professor Talbot Rice interprets his title liberally. 'Beginnings' includes a whole part (Part V) devoted to later Byzantine Art, down to the end of the 16th century. Russian art as such, except in its earliest phases, is excluded. The book is 'mainly about painting and mosaics'; architecture is wholly omitted, and stone carvings, the minor arts of metal-work, ivories and textiles are referred to in any detail only where paintings and mosaics are deficient. The object of the book is 'to provide a background against which subsequent developments of Christian art can be properly studied'. Particular attention is paid to the Byzantine world and to the rôle of Constantinople, 'for developments there were not only of the first importance but continued without interruption from the early fourth to the fourteenth century'. A great many new discoveries have been made in the field of early Christian art (roughly defined by the author as up to the end of the Romanesque in the West, and later in the East) in the last thirty years and many new theories have been disseminated. The author aims at 'saying something about nearly all the more important of these discoveries and theories'; but the book, covering as it does a very wide field, is intended primarily for the more general reader.

The field covered is indeed immense, ranging in space from Western Asia to Ireland; and in time from the beginning of our era to the 16th century in certain areas. It might have been more illuminating to have limited the period covered say up to A.D. 900, and to have treated it less descriptively and more analytically. As it is, the book contains a great mass of informa-

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tion based for the most part on an up-to-date conspectus of the literature, in itself no mean feat. There is no other up-to-date book which does this on anything like the scale here attempted, though Grabar and Nordenfalk's recent Skira publication covers most of the ground, and with greater originality of thought, so far as painting is concerned.

Early Christian Art is a field that opens almost endless scope for theorizing, and one in which experts can take widely different stands on the date and affinities of major documents. One may instance, for example, the diversity of opinions on the Castelseprio frescoes, or the ivories of Maximian's chair in Ravenna, or of the St Mark ivories, the latter variously dated between the 6th and the 14th century, and attributed to almost every quarter of the Mediterranean area from Italy eastwards. In such a confusing field the layman badly needs fixed points and a guide. Professor Talbot Rice does not, I feel, succeed in making the subject lucid, no doubt partly because of the intrinsic difficulty of the task, but also because of his essentially descriptive rather than analytic approach. But he is never dogmatic and impartially reviews the diverse opinions whilst adding his own. He avoids arguments over the source of disputed works, or the rôles played by different areas. His method instead is to define the three main stylistic trends in late Antique art—the ' Picturesque ', the ' Expressionist ' and the ' Neo-Attic ' (here he is to a large extent following Morey)—which were to contribute in various ways to the formation of medieval art. To these styles the first three chapters respectively are devoted. In front of each of the five parts into which the book is divided are helpful passages in italics which outline the theme of the part that lies ahead.

This is not the place to attempt detailed criticisms. A mistake on pp. 41-2 may be noted. The author quotes Professor Graber (*Les Peintures de l'Évangile de Sinope*, Paris, 1948) as ascribing the 6th-century *Sinopensis* fragment to Asia Minor, whereas he specifically assigns it to Syria or Mesopotamia and not to Asia Minor. The chapter on Early Christian Art in Britain, however, it must be said, shows no familiarity with recent research; for example, the work of Nordenfalk and Henry on the Insular manuscripts before the Book of Durrow, or of Kitzinger's work on St Cuthbert's coffin. The treatment of the remarkable insular ornament of the Durrow-Kells era is, to say the least of it, sketchy. A scrap of interlace is given (fig. 14) by way of description of it, and it is said that ' the style was developed in Britain to a great extent thanks to links with Scandinavia '. In fact Scandinavian influence had nothing to do with it. The Book of Durrow, a work of great novelty and originality, is described as conservative. The Alfred Jewel is picked out as the most important piece of jewellery of the late Saxon period, a prominence which it does not deserve, for we now see that it is not a particularly informative object and lies largely outside the main stream of development. Such more detailed criticisms of the part best known to the reviewer may serve to indicate that a work of such far-ranging scope cannot be expected to be satisfactory at all points. Nevertheless the general reader and student alike should be indebted to Professor Talbot Rice for his ambitious canvas and for the varied and abundant illustrations.

R. L. S. BRUCE-MITFORD

DIE WELT DER KELTEN. By JACQUES MOREAU. *Grosse Kulturen der Frühzeit*. Gustav Kilpper Verlag, Stuttgart, 1958. pp. 270 + 104 plates + 2 maps. DM 24.50

This book appears in a well-known popular series of attractive format. The text consists of eight short and generalized chapters, followed by an appendix on the archaeological subdivisions of the La Tène Culture. There are a hundred and four plates of photographic reproductions, most of which are excellent, but the colour plate of the Battersea shield is garish. The inclusion of Stonehenge is most misleading despite what is said in the text, and a case might be made for the irrelevance of some other illustrations, perhaps especially

the 11th-century cross from Carew. On the other hand, the majority of the plates are very welcome and provide conveniently accessible illustrations of such subjects as the early La Tène metal work art from the Middle Rhenish chieftains graves, the Entremont, and later, sculpture from Provence, and Gallo-Roman art from other parts of France including the figures from Neuvy-en-Sullias, and little-known anthropomorphic wooden carvings from Montbouy near Orleans. There are some pages of brief commentary on the plates with cross references to the text, and scales are given, but there are no bibliographical references that might lead one to the original publication of the lesser known subjects. The general bibliography shows a lack of critical knowledge of the existing literature. Many good things are included, but others find no place, and a number of items could well have been left out as worthless or obsolete.

The author, who is a professor of Ancient History, defines the Celts on a linguistic basis, a definition that is unsatisfactory in many ways, and patently unrealistic for historical times. We find the usual preliminaries about 'indogermanen', and hope that this will be one of the last books in which this unfortunate term is to be used. The author's concept as to what is Celtic is projected to include the English composed and written poetry of Yeats and Dylan Thomas, but he gives no examples of verse in the Celtic tongues ancient or modern. On the whole the book gives the impression of a slightly romanticized write-up of the Celts of antiquity, and of subsequent Celtic traditions, by an author whose real field lies elsewhere.

T. G. E. POWELL

CENTRAL GAULISH POTTERS. By J. A. STANFIELD and GRACE SIMPSON. *Oxford University Press (for University of Durham)*, 1958. pp. liii and 300, 170 plates, 51 text figures. 126s.

The publication of *Central Gaulish Potters* is an event of major importance for all concerned with the archaeology of the Roman Empire, as Central Gaulish samian is frequently the chief, and not seldom the only source of precise dating evidence for second-century sites in the northern provinces. Basically the book is a series of studies of the decorated bowls of individual potters, linked by an introduction, and illustrated by admirable plates of line-drawings of sherds at half-scale. British material predominates, and rightly so, as the many British military sites dated by historical evidence afford a chronological framework within which independent, non-typological dating of potters becomes possible. Nevertheless, more drawings of samian from the Continent would have been welcome, especially some of the vast collection at St Germain-en-Laye, for which Déchelette's lists still whet the appetite without satisfying it.

For some years it has been becoming increasingly obvious that many Central Gaulish potters were dated too early by the late Dr Felix Oswald in his pioneer studies. *Central Gaulish Potters* goes far towards correcting this tendency, perhaps even overstepping the mark a little with potters like SACER and ATTIANVS, but it is abundantly clear that much more work is needed on the precise dating of Antonine samian. The basic difficulty is the rarity of substantial groups of material firmly linked to one or other of the two Antonine periods commonly found in British auxiliary forts.

It is not to be expected that all students of samian will agree with every attribution of an unsigned or unstamped sherd to a given potter. For instance, many of the bowls on Plates 154-5 said to be by PVGNVS are certainly from moulds made by SECVNDVS, who only appears in the index. Nor will the assignment of sherds 412-590 to IOENALIS and DONNAVVS, on the strength of three bowl-finishers' stamps, command universal conviction. The difficulties are well illustrated by Monsieur Terrisse's discovery at Martres de Veyre of a bowl from

the same mould as one from Kettering (C.G.P. No. 324). The latter is stamped by MEDETVS, the former by DONNAVCVS, both stamps are, significantly, bowl-makers' ones applied after the moulding. Indeed, the need to distinguish carefully between such stamps and stamps in the mould is not quite sufficiently stressed. Points of disagreement in attribution are, however, gratifyingly few, and none seems to affect the suggested dates of manufacture.

Unfortunately there is a serious defect in the arrangement of the book. It is presumably intended to serve *inter alia* excavators and museum curators who wish to identify and date samian for themselves. This has to be done, as Miss Simpson rightly stresses, largely by study of the minor elements of decoration, such as ovolos. It is, therefore, a pity that the full-scale drawings of these details are scattered in the text figures throughout the book, not all of them very accurately or clearly depicted. In practice the non-specialist has to comb the book from one end to the other, often with mounting exasperation. It is to be hoped that in any future edition it will prove possible to draw these minor decorative details together in their classes, each with the names of the potter or potters who used it clearly shown, after the manner of Knorr's *Töpfer und Fabriken*.

This said, the book remains indispensable for Roman studies. It is, indeed, a triumphant memorial to the immense labour and acuteness of the late J. A. Stanfield, whose basic framework for it has been so admirably completed by Miss Simpson. A final word of congratulation and gratitude to the University of Durham and to Professor Eric Birley for bringing about the publication will not be out of place.

B. R. HARTLEY

THE CELTS. (Volume 6 in the Ancient Peoples and Places Series.) By T. G. E. POWELL.

Thames and Hudson, London, 1958. pp. 283, with 79 photographs, 34 line drawings and maps. 25s.

In recent years not only archaeological research but the interest of the general public has turned again increasingly and after a long break, to the Celts. This interest expressed itself for example in the great exhibition at Schaffhausen in 1957 entitled 'The Art and Culture of the Celts', as well as in several publications which try and convey something of the history and culture of the Celts to a large circle of readers. From the point of view of archaeology, and up to now, this attempt seems to us to have succeeded best in this present book by Powell. The sixth volume in the Ancient Peoples and Places series edited by the editor of *ANTIQUITY*, it continues the high tradition of the earlier volumes.

In his introductory chapter, 'Finding the Celts', Powell shows in a concise way the sources he relies on and describes the various disciplines (i.e. archaeology, history and philology) which most contribute to Celtic research. Time and again the critical question is put as to the limitations of interpretation in these sources, and this ensures stimulating reading for the expert reader. Of course, in attempting to refer Celtic culture known in the last few centuries B.C. back to periods of Central and West European prehistory in which a lack of writing prevails and our only source is archaeology, our author realizes he cannot be so critical.

In the second chapter, 'The Celts in Life', we are given a most lively picture of all aspects of Celtic culture and life except religion, to which the third chapter, 'The Celtic Supernatural', is devoted. In a most happy way in this third chapter Powell connects the evidence from archaeology with the admittedly late (but in its essentials very ancient) traditions in early Irish literature. The book concludes with a fourth chapter, 'The Celtic Survival', which deals briefly with the relations between Celts and Germans, with Roman Britain, and finally with the people of Ireland who, furthest west in Europe, still speak a Celtic language.

ANTIQUITY

Each of the four chapters is provided with a clear summary of the most important literature. It is of course understandable that the author should treat in detail in a book primarily designed for British readers with the Western Celtic tribes in France and the British Isles. The archaeological material from Central Europe and the Danube Basin which is much more difficult to survey—even in the published literature—has not been treated to the same extent. Anyone who knows how difficult it is to deal with so complex a subject briefly and lucidly will fully understand the approach chosen. But even so a few more hints could have been given even in this survey. We have in mind some of Paul Reinecke's works, to which reference would have been as useful as, for instance, the reference to the summarizing article on Oppida by Joachim Werner in *Die Welt als Geschichte* (1939). And the material found at Magdalenenberg in Austrian Carinthia provides information of great value not yet properly appreciated particularly in the field of Celtic religion. The life-sized classical bronze figure of a youth now in the Vienna Museum and dating from the beginning of the 1st century B.C. had probably been worshipped in a Temple as Mars Latobius by the Norriker.

In spite of the mass of material dealt with, this book is written in an easy vein. It is pleasant to read because so well printed. The excellent illustrations are carefully chosen and well described.

WERNER KRÄMER

VORZEIT AN RHEIN UND DONAU; Südwestdeutschland Nordschweiz Ostfrankreich. Das Bild in Forschung und Lehre. Text by WOLFGANG KIMMIG, photographs by HELLMUT HELL. *Jan Thorbecke Verlag, Lindau and Konstanz, 1958. pp. 133. 142 illustrations include 5 colour-plates and distribution maps. D.M. 32.50.*

This book is the first of a series, planned on a regional basis and directed to a non-specialist public, and particularly to those teachers who are in need of an attractive yet authoritative presentation of prehistoric fact and archaeological material. The photographs, specially taken by Dr Hell, are magnificent; but it is not only a picture-book, and Professor Kimmig's authorship of the text, which is written in a discreetly popular style, ensures its quality.

Ignoring political frontiers, a certain unity is envisaged throughout the region lying immediately north-west of the high Alps, 'der Raum nordwestlich der Alpen'. It extends from Württemberg and Baden to eastern France and central Switzerland; Baden and Württemberg, however, provide its core, and from them are drawn most of the illustrations. This region holds some of the most famous European sites, starting with Heidelberg man and the Mauer jaw, the Vogelherdhöhle, the Goldberg, Michelsberg, Buchau and finally the Heuneburg. It is also an area singularly well situated for viewing the prehistoric panorama with the successive meeting, mingling and repelling of movements from east or west. This pattern had begun in the Old Stone Age and is still present when Celts and Romans are the protagonists. Here too the survival of old populations is particularly well demonstrated. Tumulus burial survives from Battle-axe beginnings, unbroken to its culmination in the huge tumulus of a Hallstatt 'prince' at Hohmichele. Similarly, flat inhumation survives here alongside tumulus burial into the La Tène Iron Age.

Perhaps rather more certainty than is quite justified is given to assertions about beakers and Beaker-people, envisaged as metal prospectors from Iberia, introducing the first metal objects. In a book of this nature great simplification is necessary, but it is a little confusing to find Early Iron Age I, beginning in 1300, covering the Urnfields, and eliminating altogether a Late Bronze Age, while the disturbances which led to the Urnfield expansion are put down to repercussions, however distant, of the discovery and exploitation of iron. The Hallstatt C-D Iron Age becomes Early Iron Age II, and La Tène is late Iron Age from

500 B.C. In this last period the unity and individuality of the 'region north-west of the Alps' is submerged under a wave of 'Celticization'. Destruction at the Heuneburg and other early La Tène sites is tentatively related to the descent of the Celts into North Italy in the early 4th century.

Excellent as is the text in its presentation it is the photographs which make the strongest immediate impression. A skilful middle course has been taken between the informative but rather bleak type of 'Museum photograph' and the fashionable tricks and distortions found in some 'Art Books'. Detail and texture are so finely shown that professional archaeologists will get as much information and pleasure as the non-specialist. Dramatic shadow and over-enlargement have been avoided in almost all cases; the latter fault is particularly tempting with small objects like Celtic brooches, which have a fortuitous affinity with modern taste. The colour-plates are very successful. It is a pity it was not possible to include one plate to show the truly remarkable colour effects of painted and encrusted Hallstatt pots like those from Hohmichele or the Heuneburg, perhaps in place of the rather less successful bronze bowls (dark blue on a scarlet ground). Good use is made of line drawings to show details of building construction or to complete objects in themselves incomplete or shown in detail on the plates. Possibly even greater use could have been made with advantage to show the full length of swords, illustrated only by their more decorative hilts.

The captions give the scale and most of the descriptive information on the same page as the Figures, while provenance and references to literature appear in the Figure Index at the end, along with the present whereabouts of the object. A point of general principle arises in this connection, which is that whenever captions are used the provenance should be included in them. The omission of this detail comes, I believe, from a mistaken idea that the public is less interested than the specialist in provenance, whereas in fact it is often the first question asked, particularly with local objects and familiar places (the same criticism applies to museum display in many otherwise excellent Continental exhibitions).

These are small matters beside the admiration felt and gratitude due to the authors of both text and photographs, who must be congratulated on a fine piece of work.

N. K. SANDARS

LACHISH IV: THE BRONZE AGE. By OLGA TUFNELL. *Oxford University Press*, 1958.

Pt. 1, Text, pp. 351. Pt. 2, Plates, pp. 96. £8 8s.

HAZOR I: An account of the first season of excavations, 1955. By Y. YADIN and others.

Magnes Press, the Hebrew University, Jerusalem, 1958. pp. 160, 184 plates. £8 8s.

THE EXCAVATION AT HERODIAN JERICHO, 1951. By JAMES PRITCHARD. *Council of the American Schools of Oriental Research, XXXII-XXXIII, 1958. No price stated.*

In these three volumes we have a great contrast in excavation methods and in methods of presenting a report, and it seems worth while to consider this, especially the question of reports, in general terms before dealing with the results of the individual excavations.

There are necessarily many differences owing to the circumstances of the three expeditions. *Lachish IV* is the final one of a series of excellently produced volumes on excavations which terminated in 1938. The author was present throughout the excavations, but was not the field archaeologist in charge of the work. The tragic death of the Director of the expedition, Mr J. L. Starkey, brought the work to an untimely end, and everyone must admire Miss Tufnell's diligence and devotion in overcoming the handicap of the loss of the leader whose interpretation would have made the production of the report so much easier. The delay in the appearance of the final volume of the report is due in part to the break of the war years, and in part that everything devolved on Miss Tufnell's shoulders.

ANTIQUITY

Hazor I appears within three years of the excavations it records. It is therefore as prompt as any detailed report can be. It is even more magnificent than *Lachish*. It is the product of a team of distinguished archaeologists working under Dr Yadin and it has behind it the resources of the House of Rothschild, greater even than those of the Wellcome Trust. Moreover, the expedition was able to call upon the collaboration of the Ministry of Labour (which provided the man-power), the Ministry of Defence (which provided a system of field telephones between sites—and how many directors of large-scale excavations will find their mouths watering at this idea), and the Director of Railways (who provided a light railway for the disposal of spoil). Not for nothing had the Director been Chief of Staff of the Israeli army, but one must also recognize the nation-wide interest in archaeology in Israel. The authors of the report are apparently able to devote their time between excavations to immediate work on the materials. Altogether, conditions are in every respect favourable.

Compared to these two volumes the report on *Herodian Jericho* is modest. Contrary to what those accustomed to the grandiose in American finance think, the resources of the American School of Oriental Studies in Jerusalem for excavation are limited. Only a short season's work can be carried out. The staff and students of the School are transitory, and the excavation of a site initiated in one year is carried on in subsequent years by different persons. The present report deals with part of a complex and is published separately from the other part, because different individuals were in charge. This is a very great pity.

The differences between the reports are even greater than the circumstances of the expeditions necessarily produce. The excavations at Tell Duweir were the last of those carried out by the pure Petrie school. Sir Flinders Petrie first introduced stratigraphy to Palestine. But this was in 1890, and he never really advanced in his methods, which were so salutary and revolutionary at that date; objects were recorded in foot levels. They are still recorded in foot levels in the sections in *Lachish IV*. Petrie had to work on a shoe-string. He evolved a method of recording his finds by type series, which reduced the drawings of objects to a minimum. Type series are an excellent thing, for they enable one to compare the finds between groups and to provide a reference for recognizable sherds too small to draw. But as a sole medium they are infuriating. One can only most laboriously check the composition of groups, and can only make a visual comparison by tracing the components off. Moreover, typing vessels is a subjective process, and all detail considered non-essential by the author disappears in the process. Miss Tufnell has in fact recognized the need for the assembling of groups by a chart of the forms appearing in certain main groups. But it should be noted that it is not necessarily a drawing of the actual vessel from the group which appears in the chart, but the vessel on which it was typed. The space devoted to broad general discussion of features, ranging over long periods, would have been more usefully devoted to the full publication of groups.

In contrast, *Hazor I* is as fully documented as any user of the volume could wish. The recognizable forms of each stratum in each of the areas excavated are published in full. One has available at a glance the material of forming a critical judgment on the excavators' conclusions. Of this aspect of the method of publication there can be nothing but admiration, and all archaeologists working in the same field will welcome the season-by-season publication which places the material so promptly at their disposal. But doubts as to the advisability of this seasonal method do remain. Many of them Dr Yadin recognizes in his introduction and many of them are concerned with additional cost; if the expedition has the resources, that is its affair. But there are others. Both in succession of strata and in chronology subsequent work may require modification, even though the results of the second season's work have been taken into account. These will all be dealt with in the final volume. But meanwhile, in references and in syntheses, the results here published will have spread far afield

and it will take a long time to catch up with any resultant errors. In my view, a slightly longer delay, and then the equally full publication, period by period, would have been better still, particularly since excellent interim reports are published annually in the *Israel Exploration Journal*.

The report on *Herodian Jericho* is the report of a single season's work. It is a very full and clear description of the finds, but it seems very unfortunate that the annual change of personnel has divorced two parts of what must be a single complex. The recording of finds, moreover, has neither the merits of the Petrie nor the Yadin school. The pottery and other objects are fully drawn and fully photographed, but not for the most part described, and their association with groups or strata is not recorded. One can only draw general inferences that the site was occupied during a certain period.

Lachish IV is the least interesting of the volumes on the site, but that is no fault of the author or the excavations. The excavations were interrupted before clearance of the tell reached the Bronze Age levels, and, apart from the Fosse Temple, published in *Lachish II*, information about the period came almost entirely from the tombs. The exception is the sections cut through the edge of the mound. These are recorded in the Petrie method by foot-levels, and the author has not got the critical eye for stratification which a field archaeologist would have. If the section of the north-west trench was accurate (and not, as it probably is, schematic), the whole of the fill was added as the revetment of the Middle Bronze Age wall. It would therefore be valueless for determining the succession of Early Bronze Age material contained in the fill. In any case, there is a considerable group of Middle Bronze Age material at 6 ft., and therefore, even if there was an intact body of Early Bronze Age fill, one cannot with safety use the succession of types in a fill in which there are obvious intrusions and disturbances. The groups of finds from sites outside the area of the tell provide interesting evidence of occupation during the Late Chalcolithic in caves, and the growth of settlement on the tell at a period probably not earlier than Early Bronze III. The disruption of the Early Bronze Age civilization is shown by the appearance of an alien growth, to which Miss Tufnell gives the name Caliciform culture (but how can a culture be shaped like a calyx or chalice? and in any case the bowls in question are not really like a chalice). The early Middle Bronze occupation of Palestine is illustrated by a few groups confirming the gradual and small-size spread of the new civilizing wave. Full urban development only appeared with Middle Bronze II, and occupation apparently continued throughout the Late Bronze Age. It may be doubted if Miss Tufnell is wise in giving a date in years to different groups when there are so few keys to tie anything down to a fixed calendar.

The site of Hazor was first identified in modern times by Professor Garstang, though Dr Yadin points out that Garstang was apparently ignorant of its identification in 1875 by J. L. Porter. It is a most spectacular site. A great plateau is defended either by natural slopes or an earthen rampart, and in the south-west corner is a higher tell. Excavation showed that the plateau area was first occupied, and its defences erected, in Middle Bronze II. It would therefore seem to be a typical example of the Hyksos method of fortification. Occupation continued to Late Bronze II, and later reports will show how this is related to the chronology of the Israelite occupation of Palestine, for it is one of the sites claimed as having been destroyed by Joshua. The excavations on the tell recorded in the present report deal only with Iron Age levels. A first great public building is attributed to Solomon, and subsequent buildings carry the history down to the destruction of the site by Tiglath Pilezar III in 732 B.C., with a late citadel lasting till the Hellenistic period. The dating of the earlier phases seems slightly early with reference to the Samaria evidence. The pottery of strata X-IX seems to correspond rather with Samaria III (c. 840 B.C.) than I-II. But some of the discrepancies may arise from methods of recording. This is the one real fault to be found

with the report. There is no indication of the relation of the finds to the structures. It can be inferred that they come from the fill above the floors, and therefore were likely to be used right down to the construction of the next stage. Therefore a building constructed in the period of Solomon might continue in use until the first half of the 9th century. But there is not a single real section on which one can base evidence. Those published are purely schematic, based on theodolite levels, with neatly ruled floors, little better than those of Megiddo. It is a great pity that an otherwise admirable report, illustrated by the beautiful photographs that those who remember Mr Schweig's work in the pre-war years would expect, should be marred in this very fundamental respect.

Herodian Jericho is also well illustrated by plans, photographs and drawings of pottery, but also lacks any real measured sections and, as has already been said, lacks the evidence of associating the published material with the find-spot. But the weakest point in the report is due to the lack of co-ordination with previous work on the site. The importance of the excavations will be lost to those who have not visited the site. In a previous publication of the American School the clearance of a great façade in *opus reticulatum*, on the banks of the Wadi Qelt, was described. This report deals with a large public building on the summit of the slope, in which pottery and coins of closely similar character were found. In the division of the report between two authors one loses the impression of a monumental complex, in the style of great Italian villas on hill-slopes, which one grasps on the spot. Dr Pritchard is diffident in identifying his structure as Herod's palace which the accord of features of the façade with Josephus' account suggests, and prefers to identify it as a gymnasium. It is quite true that few features suggesting magnificence, other than the scale of the building, survive, but nevertheless the whole Italianate conception of the lay-out does seem to make such an identification preferable.

KATHLEEN M. KENYON

ROYAL COMMISSION ON THE ANCIENT MONUMENTS OF SCOTLAND.

The County of Roxburgh, 2 vols. *pp.* xxxii + 506, with 618 *figures and a map*. The County of Selkirk, 1 vol. *pp.* xxiv + 185 with 137 *figures and a map*. *Edinburgh: H.M. Stationery Office, 1956 and 1957. 105s. and 67s.*

These two inventories cover adjacent inland areas immediately north of the Border. This position determined their history in the medieval period; the major monuments recorded show evidence of the troubled conditions. Earlier, in the Roman Age, the area also lay in a debatable land and the interaction of military advance and native adaptation dominates the history of the sites. It is these two periods that provide the greater bulk of the material listed.

The barren uplands which constitute a large part of the two counties offered few attractions to prehistoric man. Selkirkshire, in particular, shows a sparse distribution pattern in both Bronze and Iron Ages, though with a significant change in emphasis as one passes from the higher to the lower lands. Roxburghshire is more favoured and a concentration of Bronze Age finds in the valleys of the lower Teviot and the Tweed may be noted. This county includes a number of important hill-forts. The excavation of some of these, carried out and reported on independently, but with the full co-operation of the Commission, provides the basis of a valuable discussion of the Iron Age. While the sequence is clearly established by these excavations, the absolute dates attributed to the phases are probably too low. A well-planned and carefully executed campaign carried out in conjunction with the field survey greatly enhances the value of the latter and the Commission is greatly to be congratulated in having secured the co-operation of the archaeologists who carried out this work.

REVIEWS

Many of the earlier native settlements survived into the Roman period. Of the Roman military sites Newstead has long been known as a key position in the historical interpretation of the northern frontier. Its history is here considered in the light of more recent discoveries at Cappuck and Oakwood and against the background of the Roman roads. Early Christian inscriptions are represented by a single example in each county. Fuller field work has enabled the Commission to attribute certain types of site to this period; the distribution map of Dark Age sites in Roxburghshire forms a notable contribution to this field of study, enabling the student to appreciate the pattern of life in the period between the end of Roman rule and the coming of the Normans.

In the full Middle Ages Roxburghshire includes three of the four great border abbeys—Jedburgh, Kelso and Melrose. The accounts of these monuments rightly dominate the survey of that period. Historically and architecturally the most interesting is Jedburgh, where a substantial part of the church of the 12th and early 13th century is still standing. The development of this complex building is thought to have been influenced by an earlier church on the site of the nave. The reasons for this suggestion are not entirely convincing and the site plan (fig. 222) does not fully bear out the description in the text. In the second quarter of the 12th century—the date attributed to the western part of the quire—one might expect a main apse to balance those east of the transepts, rather than the square east end suggested on the site plan. These are minor criticisms. Jedburgh is a site that would repay careful excavation directed to a detailed elucidation of the layout of the earliest monastic plan. Kelso is a magnificent fragment. Severe and archaic at first sight, it includes, as the survey has recorded, transitional detail, calling for a date as late as *c.* 1200.

The main criticism that we have to offer regards the inadequate treatment of the great houses of the classical and romantic periods. No plan is provided of Ednam House, Kelso (1761), by a local architect, James Nisbet, though there are general views and a number of illustrations of detail. At Abbotsford some details would have been welcome in addition to the plan and general views, which hardly bring out the idiosyncrasies of Scott's romantic taste. For Floors Castle a single view and a short description have to suffice. Playfair, we are told, respected Vanbrugh's plan and 'when he had done the plain Georgian mansion stood transformed, tricked out in its quasi-Caroline finery'; it would have been nice to have ocular demonstration.

The Inventories are admirably compiled with lucid descriptions of sites and objects, set out with an economy of space. With the exception noted the monuments are fully and adequately illustrated with plans and photographs. The introductions represent an up-to-date survey of the archaeology of the two countries as illustrated by the surviving remains. The account of the Forest of Selkirk with its map of the medieval steadings is a valuable contribution to an unusual field of study.

C. A. RALEGH RADFORD

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